TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~959~~ 69

SIMON WING, APPELLANT,

vs.

CHRISTOPHER C. SCHOONMAKER.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF NEW YORK.

FILED SEPTEMBER 29, 1869.

SUPREME COURT OF THE UNITED STATES.

No. 259.

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vs.

CHRISTOPHER C. SCHOONMAKER.

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1 *Copy bill of complaint.*

U. S. circuit court, northern district of New York.—In equity.

SIMON WING, COMPLAINANT,
vs.
CHRISTOPHER C. SCHOONMAKER, DEFENDANT.

To the honorable the judges of said court:

Simon Wing, of the city of Boston, and a citizen of the State of Massachusetts, brings this his bill of complaint against Christopher C. Schoonmaker, of the city of Troy, and northern district of New York, and a citizen of the State of New York. And thereupon your orator complains and says that he is informed and believes that one Albert S. Southworth was and is the original and first inventor of a new and useful improvement in photographic cameras, fully described in the letters-patent hereinafter mentioned; the same being a new and useful improvement, which was not known or used before his said invention, and was not at the time of his application for a patent, as hereinafter mentioned, in public use or on sale with his consent or allowance, and
2 the said Southworth being so as aforesaid the inventor thereof, and then being a citizen of the United States, on the 10th day of April, A. D. 1865, upon due application therefor, did obtain certain letters-patent therefor, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, bearing date the day and year aforesaid, whereby there was secured to him, his heirs, executors, administrators, and assigns, for the term of fourteen years from and after the date of said letters-patent, the full and exclusive right of making, constructing, using, and vending to others to be used, the said improvement; and by virtue thereof the said Southworth became and was the sole owner of all the rights and privileges secured by said letters-patent. And afterwards the said Albert S. Southworth surrendered the said letters-patent on account of their being inoperative and invalid by reason of a defective or insufficient specification, and thereupon such proceedings were had, that on the 25th day of September, A. D. 1860, the Commissioner of patents duly granted and issued to said Albert S. Southworth new letters-patent, under the seal of the Patent Office, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, for said invention, with an amended specification, as will appear by said reissued letters-patent, or a duly authenticated copy thereof, here in court to be produced, if required.

And further, that the said Southworth, on the 8th day of December, 1860, by his deed of that date, duly executed and recorded, for a valuable consideration, conveyed to Simon Wing and Marcus Ormsbee all his right, title, and interest in and to the invention secured by said reissued letters-patent, and confirmed to them their title thereto, as by the said deed, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And further, that the said Marcus Ormsbee, on the sixth day of February, 1861, by his deed of that date, duly executed and recorded,
3 for a valuable consideration, conveyed to the said Simon Wing all his right, title, and interest in and to the invention secured by the said reissued letters-patent for, to, and in all of the United States except the city of New York, and the several States of Rhode Island, Massachusetts, Pennsylvania, Illinois, Delaware, Maryland, Virginia,

North Carolina, South Carolina, and Georgia, as by the said deed, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And your orator further shows unto your honors that since the assignment to him of said rights, under said reissued letters-patent, as aforesaid, he has put into use the invention secured to him thereby, and that up to the seventh day of August, 1865, he was, except for the doings of the said defendant, as hereinafter set forth, and of other wrong-doers in the premises, in the exclusive possession and enjoyment thereof within and for the city of Troy, New York, and that said right was of great value to your orator.

And your orator further shows unto your honors that the validity of the said reissued letters-patent has been fully established by the judgment and decree of the circuit court of the United States in and for the district of Massachusetts, at the May term of said court, 1865, in a bill in equity founded thereon, and then duly pending before said court, wherein the said Simon Wing was complainant, and Charles F. Richardson was defendant, after a full hearing of the parties, and the pleadings and proofs and arguments of their respective counsel, and due consideration thereof, whereupon it was adjudged and decreed by the court that the letters-patent in the said bill mentioned were valid, and that the respondent had infringed the same, as by an authenticated copy of said decree of said court, here in court to be produced, if required, will more fully appear.

And you orator further shows unto your honors that the validity of said reissued letters-patent has been further established by the decree of the circuit court of the United States in and for the southern
4 district of New York, at the term of said court in October, 1865, upon twelve bills in equity founded thereon, wherein the said Marcus Ormsbee was complainant, and George G. Rockwood and various others were defendants, after a full hearing of the pleadings and proofs and arguments of counsel for the respective parties, whereupon it was decreed by said court that injunctions should issue against the said defendants, respectively, restraining them from further infringement of said reissued letters-patent. Yet the said defendant, well knowing the premises and the rights secured to your orator as aforesaid, but contriving to injure your orator and deprive him of the benefits and advantages which might and otherwise would accrue unto him from the said invention, as your orator is informed and believes, without the consent or license of your orator, and in violation of his rights, and in infringement of said reissued letters-patent, did, after the date thereof, and previous to the seventh day of August, 1865, and in the city of Troy aforesaid, unlawfully and wrongfully make, sell, and use cameras embracing in their construction and mode of operation the said improvement, the exclusive right to which in said city of Troy was then vested in your orator by the reissued letters-patent above mentioned, and said assignments thereof.

All of which actings and doings are contrary to equity and good conscience, and tend to the manifest injury of your orator in the premises.

In consideration whereof, and forasmuch as your orator can only have adequate relief in this honorable court, where matters and things of this kind are made cognizable by statute; to the end therefore that the said defendant may, if he can, show why your orator should not have the relief hereby prayed, and may upon his corporeal oath, and according to his best and utmost knowledge, remembrance, information, and be-

lief, full, true, direct, and perfect answers make to the premises, and to all the several matters hereinbefore stated and charged, as fully and particularly as if interrogated as to each and every of said matters, and may be compelled to account for and pay to your orator the profits by him acquired, and the damages suffered by your orator from the aforesaid unlawful acts, may it please your honors that the said defendant may be decreed to account for and pay over to your orator all such gains and profits as he may have made by the use of the said invention, and to grant to your orator such other and further relief as shall be agreeable to equity, and as to this honorable court shall seem fit.

And also may it please your honors to grant unto your orator a writ of subpœna, issuing out of and under the seal of this honorable court, directed to the said defendant, commanding him by a certain day, and under a certain penalty, to be and appear in this honorable court, then and there to answer the premises, and to stand to and abide such order and decree as may be made against him.

And your orator will ever pray.

SIMON WING.

NORTON & COWEN,
Solicitors, and of Counsel for Complainant.

UNITED STATES OF AMERICA,
Northern District of New York, ss:

Simon Wing, being duly sworn according to law, deposes and says that he is the complainant in the foregoing bill named, and has read the same, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated on information and belief; and as to those matters he believes it to be true. And further, that he verily believes Albert S. Southworth to have been the first and original inventor of the improvements claimed in said reissued letters-patent, and that the same had not been in use nor described before the invention or discovery thereof by said Southworth.

SIMON WING.

Sworn to before this 14th day of August, 1866.

A. A. BOYCE,
U. S. Com. Northern Dist. of N. Y.

6 In the circuit court of the United States in and for the northern district of New York.—In equity.

The answer of C. C. Schoonmaker, defendant, vs. to the bill of complaint of Simon Wing, complainant.

The defendant, now and at all times hereafter, saving and reserving to himself all manner of benefit and advantage of exception that can or may be had or taken to the many errors, insufficiencies, and other imperfections in the said bill of complaint contained, for answer thereto, or to so much thereof as he is advised it is material and necessary for him to make answer unto, answering, says:

That, so far as he has any knowledge or information, he does not believe, and therefore denies, that one Albert S. Southworth, mentioned in complainant's bill of complaint, ever invented the new and useful improvement in photographic cameras as in said bill of complaint is alleged, or that he ever was the original and first inventor of any such improvement.

And this defendant, further answering, says that he is informed and believes, and therefore admits, that letters-patent for said alleged invention were granted Albert S. Southworth on the 10th day of April, 1855, and that the same were surrendered and a reissue granted on the 25th day of September, 1860, as in said bill is alleged; but he does not know whether the same are correctly set out in said bill or not, and prays that complainant may be required to make due proof thereof.

And this defendant, further answering, on information and belief, denies that said original letters-patent were surrendered, and a reissue sought on account of their being inoperative and invalid by reason of a defective or insufficient description and specification of said alleged improvement and invention, or that there were any such errors
7 which arose from inadvertence, accident, or mistake, and without fraudulent or deceptive intention.

This defendant, further answering, says that he is not informed whether the said several assignments alleged in said bill of complaint were made or not, or whether the said complainant is the exclusive owner of any interest in and to the said alleged invention secured by the said reissued letters-patent for, to, and in all of the United States, except the city of New York and the several States of Rhode Island, Massachusetts, Pennsylvania, Illinois, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia, as also in said bill is alleged, and prays that, if material, the complainant may be required to make due proof thereof.

This defendant, further answering, admits the trial and adjudication in relation to said reissued letters-patent as set forth in said bill of complaint, but alleges that said adjudication was occasioned by reason of insufficient development of evidence on the part of the defendant in the said action.

This defendant, further answering, on information and belief, alleges that said reissue was obtained for the purpose of appearing to cover what the patentee had no right to, and to embarrass manufacturers and photographers, and to deter the public from using what they have a right to.

And this defendant, further answering, denies that he is now or has been making and using cameras embodying substantially in their construction and mode of operation the same improvement or invention as that described or claimed in said reissued letters-patent.

This defendant, further answering, says that the reissued letters-patent are not for the same invention as the original letters-patent, and that by reason thereof the said reissued letters-patent are null and void.

This defendant, further answering, says that the claim of said reissued letters-patent is not such a one as the patentee is legally entitled to, and that by reason thereof the said letters-patent so reissued are void,
8 and the defendant claims the same benefit to this objection as though the same had been duly taken on demurrer.

This defendant, further answering, alleges and avers that the said reissued letters-patent cover inventions and things not made by said Southworth, or known to said Southworth, and that the object and purpose of aforesaid surrender and reissue was to include in and cover by the reissue more than said Southworth was the inventor of, and more than he described or claimed as his invention, and things which had been invented by others, and to render the reissue equivocal, and that the same was fraudulent, and that said reissue is equivocal and null and void, and he prays for the production of the original and reissued letters-patent.

And this defendant, further answering, insists that no construction can be put upon or given to said reissued letters-patent sufficiently broad and comprehensive to cover or include any camera or cameras which the defendant has made, sold, or issued, or is now making, selling, or using, without at the same time rendering the patent so broad as to cover inventions and things known and used before the said supposed invention of said Southworth, or to cover unpatentable subject-matter, and thereby rendering such patent invalid.

And this defendant, further answering, denies any and all infringement and violation, and all intention to infringe, any of said patent rights stated and charged in said bill of complaint, or any right or privilege belonging to said complainant.

And this defendant, further answering, says that at and before the time of the application of the said Albert S. Southworth for letters-patent of the United States, as in said bill of complaint is alleged, various kinds and descriptions of cameras and processes for multiplying pictures had been invented, and were known, used, published, described, filed, and exhibited of record, constituting a certain state of the art, to which was then, and has since become, and continued to be, public property, free and common, to be used by this defendant and all other per-
9 sons; that numerous cameras and processes so described or known and used anterior to the date of said patent, embrace substantially the cameras and processes mentioned in the specification of said Albert S. Southworth, and also of what is patented by said reissued patent, if construed as complainant insists upon having it construed.

And this defendant, further answering, says that long prior to the said supposed invention of said Southworth the invention of a sliding plate-holder for the purpose of multiplying pictures by moving the plate across the focus of the lens, or the principle of moving the focus of the lens over the surface of the plate for said purpose of multiplying pictures was well known and in public and successful use; that it was known and used in the city of New York before the alleged invention by the said Southworth, and that knowledge thereof was possessed by Marcus N. Root, now of the city of Philadelphia, Penn.; Frederick Siebert, now of Memphis, Tenn.; John Stock, Philip Hass, John S. Mayer, P. C. Duchochois, Philip Rupp, and Alexander Beckers, of the city of New York; and by Charles Williamson and Nicholas Pike, now of Brooklyn, N. Y.; James B. Sinsabaugh, of Geneva, N. Y.; S. J. Thompson, Seth E. Parsons, and R. E. Churchill, of Albany, N. Y.; A. Cobden and George W. Pine, of Troy, N. Y.; J. E. Mayell, London; John M. Linquest, of Macon, Georgia; and by Victor Piaid, now of Jersey City, N. J. And that it was also known and used in the city of Brooklyn, N. Y., before the alleged invention by the said Southworth, and that knowledge thereof was possessed by said Nicholas Pike and Charles Williamson, of said Brooklyn.

This defendant, further answering, says that, as he is informed and believes, long prior to the said supposed invention and application of the said Southworth for letters-patent of the United States, as before mentioned, the invention of a sliding plate-holder for the purpose of multiplying pictures by moving the plate across the focus of the lens, or the principle of moving the focus of the lens over the surface
10 of the plate for aforesaid purpose, was well known and in public and successful use in Prussia, France, England, and other parts of Europe, and that the first-named movement is fully and accurately described in a book published in England, ——— Hogg, in the year 1853, on page 75; and further, that the first-named movement or plan

of multiplying stereoscopic pictures was described in the *Journal of the* Photographic Society of London, and published in the month of July or August of the year 1853, and republished in the United States in the Photographic Art Journal, published at New York, by W. B. Smith, in the September number of the said year 1853, on pages 142, 143, 144, and 145.

And this defendant, further answering, says that he has not made, sold, or used, and is not now making, selling, or using, any cameras or processes or parts thereof which are described or referred to in the said reissued letters-patent, except such common parts and things as were well known and public property long prior to the time of the said supposed invention of said Southworth.

And this defendant, further answering, says that he has never infringed or intended to infringe any rights of said complainant, and he believes he has a perfect right to use cameras and make pictures thereby as he has been doing, and is fully able to respond to complainant in any amount of damages which he will ever recover against him for using cameras and making pictures thereby as aforesaid.

And he prays the benefit of as much of his answer as goes in bar of the said bill, the same as if such matter had been pleaded thereto, and he humbly submits and insists that, under the facts and circumstances above stated, the said complainant has no right to a writ of injunction and an accounting as prayed for in said bill, and no further answer to said bill than is herein given; and he prays to be hence dismissed with his reasonable costs and charges in this behalf most wrongfully sustained.

C. C. SCHOONMAKER.

TOWNSENDS & BROWNE,
Solicitors, and of Counsel for Defendants.

11 UNITED STATES OF AMERICA,
Northern District of New York, ss:

C. C. Schoonmaker, defendant above named, being duly sworn, says that he has read the foregoing answer subscribed by him and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated upon information and belief, and as to those matters he believes it to be true.

C. C. SCHOONMAKER.

Sworn before me this 4th day of May, 1867.

JOHN T. LAMPORT,
U. S. Com. for the Northern Dist. of N. Y.

United States circuit court, northern district of New York.

SIMON WING
vs.
C. C. SCHOONMAKER. } In equity.

The replication of the above-named complainant to the answer of the above-named defendant.

This repliant, saving and reserving to himself, now and at all times hereafter, any and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiences of the said answer, for replication thereunto, says that he does aver, maintain,

and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto; and that the said answer of the said defendant is uncertain, untrue, insufficient to be replied unto by this repliant, without this, that any other matter or thing whatever, in the said answer contained, material or effectual in the law to be replied unto, and nor herein and hereby well or sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things
12 this repliant is and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

NORTON & COWEN,
Solicitors, and Counsel for Complainant, Troy, N. Y.

Dated May 23d, 1867.

United States circuit court, northern district of New York.

SIMON WING
vs.
CHRISTOPHER C. SCHOONMAKER. } In equity.

Before J. T. Lamport, U. S. commissioner and examiner—present, M. P. Norton, esq., counsel for plaintiff; R. M. Townsend, esq., for defendant—1864, July 24th, at Norton & Cowen's office, Troy.

Counsel for plaintiff offers in evidence certified copy of original patent in this action, granted and dated the tenth day of April, 1855, to Albert S. Southworth, under title of plate-holder for cameras for making photographic impressions, and being numbered 12,700; the certificate under the seal of the Patent Office, and bearing date the 19th day of June, 1866, and marked Plaintiff's Exhibit A, Wing, by the examiner.

Counsel for the defendant objects to the admission of said copy of patent, on the ground that it is not sufficiently proved.

2d. That there is no sufficient proof that this copy of patent offered is a true copy of said alleged patent, or of the whole of it.

3d. That there is no sufficient proof of the existence of any such alleged original patent.

The counsel for plaintiff also offers in evidence a certified copy of the reissue of letters-patent, granted to Albert S. Southworth, of Bos-
13 ton, Mass., on the tenth day of April, 1855, for plate-holder for cameras for taking photographic impressions, and which is a reissue of the original patent issued to him, and surrendered and canceled, and said reissue bearing date the twenty-fifth day of September, 1860; and such certificate being under the seal of the Patent Office under date of June 19th, 1866, and numbered reissue 1049, and marked Plaintiff's Exhibit B, Wing, by the examiner.

The counsel for defendant here makes the same objections to the receiving of Exhibit B in evidence as were made at Exhibit A.

The counsel for the plaintiff also offers in evidence an assignment of the original and reissued patent, marked Exhibits A and B, Wing, by the examiner, and signed Albert S. Southworth, and given to Marcus Ormsbee, of Boston, and Simon Wing, plaintiff, and bearing date April 30th, 1860, and recorded in the U. S. Patent Office, May 10th, 1860, in Liber T, 5, page 371, of Transfers of Patents, which said assignment, and the certificates of acknowledgment of the execution thereof, and of the recording of the same, are in the words and figures following, that is to say:

"Whereas I, Albert S. Southworth, of Boston, in the county of Suffolk, and Commonwealth of Massachusetts, did obtain letters-patent of the United States of America, for a new and useful 'plate-holder for cameras,' which letters-patent bear date the tenth day of April, in the year of our Lord one thousand eight hundred and fifty-five:

"And whereas Marcus Ormsbee, of said Boston, artist, and Simon Wing, of Waterville, in the county of Kennebec, and State of Maine, artist, are desirous of acquiring my interest in said letters-patent:

"Now, in consideration of the sum of ten thousand dollars, to me paid by said Ormsbee and Wing, the receipt whereof is hereby acknowledged, I do hereby assign, sell, and set over unto said Ormsbee and Wing, all the right, title, and interest which I have in the inven-
14 tion as secured to me by said letters-patent in said United States, except the right to manufacture and use, and vend to others to be used, in the city of Salem, in the county of Essex, and said Commonwealth of Massachusetts; the same to be held and enjoyed by said Ormsbee and Wing for their use and behoof, and for the use and behoof of their legal representatives, to the full end of the term for which said letters-patent are or may be granted, as fully and entirely as the same would have been held and enjoyed by me, the said Southworth, had this assignment and sale not been made.

"In testimony whereof I have hereto set my hand and seal this thirtieth day of April, in the year of our Lord one thousand eight hundred and sixty.

(Signed) "ALBERT S. SOUTHWORTH. [L. S.]

"Signed, sealed, and delivered in presence of—

"R. I. BURBANK.

"A. J. WRIGHT, Jr."

"COMMONWEALTH OF MASSACHUSETTS,

"*Suffolk, ss., May* 8, 1860:

"There personally appeared the above-named Albert S. Southworth, and acknowledged the foregoing instruments to be his free act and deed.

"Before me, R. I. BURBANK,

"*Justice of the Peace.*

"C. L. J.

"U. S. PATENT OFFICE.

"Received, May 10, 1860, and recorded in Liber T, 5, page 371, of Transfers of Patents.

"In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[L. S.] "PHILIP F. THOMAS,

"*Comm'r of Patents.*"

The counsel for defendant objects to the receiving of said assignment, on the ground—

1st. The said proof is insufficient.

15 2d. That there is no sufficient proof of the existence of the alleged or original patent, nor of the alleged reissue of said patent, nor of the regularity of the proofs or proceedings on which to obtain said alleged reissue of said alleged original patent.

3d. That there is no sufficient proof now offered to allow or warrant the said alleged assignment, hereinbefore set forth, to be received in evidence.

The counsel for plaintiff also offers in evidence a certified copy of an assignment made by Albert S. Southworth, patentee, and given to Mar-

cus Ormsbee and Simon Wing, plaintiff, and dated December 8th, 1860, and recorded in U. S. Patent Office, December 14th, 1860, and proven before R. I. Burbank, justice of the peace of the county of Suffolk, Massachusetts, December 8th, 1860; the certificate being under the seal of said Patent Office, under date of the 19th of June, 1866, and marked Exhibit C, Wing, by the examiner.

The counsel for defendant objects to the introduction of Exhibit C, Wing, on the ground that there is no sufficient proof now offered to allow or warrant its admission in evidence.

2nd. That there is no sufficient proof of the existence of said alleged original patent, nor of the reissuing of the same.

3rd. That there is no sufficient proof of the regularity of the proceedings to get or obtain the alleged reissue of said alleged original patent.

4th. There is no evidence that said Southworth, this said alleged patentee in said alleged original patent, was the owner thereof, or of any part thereof, at the time he made his alleged application for said alleged reissue thereof, nor that he was the owner of said original patent, or any part thereof, at the time of the said alleged reissue thereof.

The counsel for plaintiff also offers in evidence an assignment executed by Marcus Ormsbee, on the 6th day of February, 1861, to Simon Wing, the plaintiff, and recorded in the U. S. Patent Office, Feb-
16 ruary 16th, 1861, in Liber B, 6, page 398, of Transfers of Patents, and proven on the 6th day of February, 1861, by R. I. Burbank, justice of the peace of Suffolk County, Massachusetts, and which assignment and proof of execution and certificate of record are in the words and figures following, that is to say:

"Whereas Albert S. Southworth, of Boston, in the county of Suffolk, and Commonwealth of Massachusetts, having obtained letters-patent of the United States for a 'new and useful plate-holder for cameras,' bearing date the tenth day of April, A. D. 1855, assigned, sold, and set over the same unto Marcus Ormsbee, of said Boston, artist, and Simon Wing, of Waterville, in the county of Kennebec, and State of Maine, artist:

"And whereas said letters-patent, having been surrendered by said Southworth, have been cancelled and new letters-patent ordered to issue to said Southworth on an amended specification:

"And whereas said new letters-patent have been issued to said Southworth, bearing date the twenty-fifth day of September, A. D. 1860:

"And whereas said new letters-patent have been assigned to said Ormsbee and Wing by said Southworth:

"And whereas said Wing, having obtained letters-patent of the United States for a 'new and useful improvement in photographic cameras,' has assigned, sold, and set over one undivided half part of his right, title, and interest in the same to said Ormsbee:

"And whereas said Wing is desirous of acquiring all of said Ormsbee's interest in all of said letters-patent for, to, and in all of the United States, except the city of New York, and the several States hereinafter named:

"Now, in consideration of the sum of ten thousand dollars, to me paid by said Wing, the receipt whereof is hereby acknowledged, I, the said Ormsbee, do hereby assign, sell, and set over unto said Wing all the right, title, and interest which I have in all of said letters-patent for, to, and in all of the United States, except the city of New York and the several States of Rhode Island, Massachusetts, Pennsylvania, Illi-

nois, Delaware, Maryland, Virginia, North Carolina, South Caro-
17 lina, and Georgia, and in no other place or places; the same to be held and enjoyed by said Wing for his own use and behoof, and for the use and behoof of his legal representatives, to the full end of the term for which the same are or may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made. The object and purposes of this assignment or conveyance are to constitute and make said Wing the sole owner of all of said letters-patent, and the inventions therein mentioned, for, to, and in all of the United States, except the city of New York, and the several States of Rhode Island, Massachusetts, Pennsylvania, Illinois, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia aforesaid; said Wing having assigned to me his interest in said letters-patent and said inventions for, to, and in said city of New York, and said States of Rhode Island, Massachusetts, Pennsylvania, Illinois, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia.

"In testimony whereof I have hereto set my hand and affixed my seal this sixth day of February, in the year of our Lord one thousand eight hundred and sixty-one.

[L. S.] "MARCUS ORMSBEE. [L. S.]

"Executed and delivered in presence of—

"HENRY F. SMITH.

"R. I. BURBANK.

"COMMONWEALTH OF MASSACHUSETTS,

"*Suffolk, ss., Feb. 6th, A. D.* 1861:

"There personally appeared the above-named Marcus Ormsbee, and acknowledged the foregoing instrument to be his free act and deed.

"Before me, R. I. BURBANK,

"*Justice of the Peace.*

18 "U. S. PATENT OFFICE.

"Received February 11, and recorded February 16, 1861, in Liber B, 6, page 398, of Transfers of Patents.

"In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[L. S.] "S. T. SHUGEST,

"*Acting Comm'r of Patents.*"

And hereupon the counsel for plaintiff calls as a witness—

Charles G. Hill, who, being duly sworn by said examiner, testified as follows:

Question 1. What is your name, age, residence, and occupation?

Answer. My name is Charles G. Hill; I am thirty-five years of age; I reside at Troy, N. Y.; and am a photographer by occupation.

Q. 2. How long have you resided in Troy, and how long have you been engaged in the business you named in your last answer?

A. I have resided in Troy since September, 1864, and have been engaged in the business of photographer for fifteen years and more.

Q. 3. Are you personally acquainted with Christopher C. Schoonmaker, of Troy; and if yea, how long have you known him, and in what business is he now engaged, and has been engaged since you have known him?

A. I am acquainted with him, and have known him since September,

1864; he is now present at this examination; he was engaged in the photograph business from the time I first knew him up to April, 1867, and since that time I have no personal knowledge of what business he has been engaged in.

19 Q. 4. Have you ever been engaged in the employment of the defendant Schoonmaker; and, if so, in what capacity, and for what length of time?

A. I have been, and was operator for him in photographing for one year, from September, 1864, to September, 1865, or thereabouts, at Troy.

And hereupon the further hearing in this case was postponed to July 25th, 1867, at 10 o'clock a. m.

JULY 25TH, 1867—10 *o'clock a. m.*

The parties, by their respective counsel, appeared, and the examination of the witness, Charles G. Hill, was resumed.

Q. 5. During the time you was in Mr. Schoonmaker's employ, had you the opportunity of knowing what kind of work was being done by him in the photographic art at his establishment in Troy, or by his directions?

A. I had.

Q. 6. Please look at Exhibit B, Wing, and state whether or not you have read the same; and, if so, do you understand the invention therein described.

A. I have, and do understand the invention therein described or contained.

Q. 7. Please state whether, from your examinations of the specification and claim contained in Exhibit B, Wing, you, as a practical operator in the photographic art, could practice, or carry into practical operation, the invention therein set forth.

(Defendant's counsel objects to the question, and answer it calls for, as immaterial.

2d. That it calls for the opinion of the witness, as to what he thinks he can now do, and not for the actual knowledge of the witness.)

A. I could.

Q. 8. You may state whether or not you have, at any time, as a practical operator in the photographic art, practiced, or carried into practical operation, the invention described, set forth, and contained in

20 the specifications and claim found in the Exhibit B, Wing, which you now hold in your hand.

(Defendant's counsel objects to last question on the ground that it is too general, and does not necessarily apply to the issues in this case.

2d. That it calls for immaterial testimony.)

A. I have done so.

Q. 9. When and where did you practice and carry into practical operation the invention contained in Exhibit B, Wing, in the manner in which you have testified in your answer to question 8?

A. I practiced it at Schoonmaker's, the defendant's, gallery in Troy, in 1864, and during all the time I was there.

Q. 10. You have stated in your last answer that you practiced and carried into operation the invention contained in the specifications and claim found in Exhibit B, Wing, which you now hold in your hand. Please state under whose direction, if any, you so operated in the photographic art.

(Defendant's counsel objects to the last question on the ground that it assumes to state evidence taken herein, which he has no right to do, and which is improper.

2d. That the answer of the witness, if given, must necessarily be used in connection with the assumptions and allegations in said question, and therefore the said allegations and assumptions must affect the answers of the witness.)

A. Under Mr. Schoonmaker's, the defendant.

Q. 11. When, and during what length of time, did you practice in the photographic art, in the manner as stated in your last answer?

A. From September, 1864, to September, 1865.

Q. 12. You may state whether or not, during the time, and for the time, stated in your last answer, you were employed by the de-
21 fendant, Schoonmaker, and paid by him for the services or labor performed by you for him, in the manner in which you have testified on this examination.

(Defendant's counsel objects to the last question on the ground that it calls for immaterial testimony.

2d. That it calls for not only the employment of the witness, but it calls for the evidence as to whether the defendant has paid for the services of the witness, which has no bearing in this case.)

A. I was employed and paid by him.

(The counsel for plaintiff here offers as an exhibit twelve photographic impressions on a single plate, and requests the examiner to file and mark the same, for the purpose of continuing the examination of the witness; which the examiner files and marks as Exhibit D, Wing.

Previous to the filing and marking of which exhibit, defendant's counsel objected to the receiving and marking the same, on the ground that there was no evidence given to entitle it to be received and marked.

2d. That the exhibit is not now shown in any way to be material, and, as it now appears, it cannot be material.

Plaintiff's counsel also offers as an exhibit a plate containing one photographic impression, which he requests to be filed and marked, for the purpose of continuing the examination of the witness.

To which defendant's counsel objects on the ground that there is no evidence yet given to warrant the receiving the same, or of the marking thereof; and,

2d. It does not appear that it is material, and it now appears it cannot be made material.

And hereupon the examiner files and marks said offer as Exhibit E, Wing.)

Q. 13. Please look at Exhibits D, Wing, and E, Wing, and state what they represent in the photographic art.

A. D, Wing, represents twelve pictures on one plate; the Ex-
22 hibit E, Wing, represents one picture on one plate.

Q. 14. You may state, if within your knowledge, how, or in what manner, or by what means, the several pictures on Exhibit D, Wing, were taken or placed on that plate.

A. Those pictures were made with four tubes on one block, four pictures at a time, by four distinct motions of the plate, which makes sixteen pictures on what is called one-quarter plate. In the first place, we prepare this plate to receive the impressions, then we place it in a plate-holder, and slide it into the camera box, which has four little openings or diaphrams in it, and expose the plate to the light, which makes four pictures on it, then we slide it a given distance to make four more impressions or pictures, then we raise up the plate by which four more

pictures or impressions are made, and then we draw it back, and make four more, which makes sixteen on the plate.

Q. 15. Please state, if within your knowledge, by whom, when, and where the plate Exhibit D, Wing, was made, to contain the pictures thereon.

A. It was made by me while I worked there in 1864 or 1865; I can't state which.

Q. 16. When you worked where, and for whom? State in what building.

A. In No. 282 River street, known as the Market Bank Building, in Troy, for Mr. Schoonmaker, defendant.

Q. 17. You may state, if within your knowledge, whether the pictures upon the plate, Exhibit D, Wing, were taken and put thereon in the manner and by the means substantially as described in Exhibit B, Wing, now shown you.

(Defendant's counsel objects to the last question, as indefinite and uncertain.

2d. That it calls for immaterial and improper evidence.)

23 A. They were made by this process; as I understand it, this drawing attached to Exhibit B represents the taking of four pictures on one plate, by one tube.

Q. 18. State whether in the defendant's establishment, and during the time you were employed there, photographic impressions were taken upon any other substance or plate than that represented by Exhibit D, Wing; and, if so, upon what.

A. They were, negatives made upon glass.

Q. 19. About how extensive was this kind of work carried on in that establishment, during the time you were there employed by the defendant?

A. From one hundred and thirty to two hundred dollars per week, I should think.

Q. 20. (Counsel for the complainant instructs the witness that when he proposed the last question, he meant to have the witness understand and testify as to quantity or number of pictures so taken per day, week, month, or during the time he was employed there, in the manner and by the means as testified to by him.) And I now desire the witness to state in answer to this question, as to the fact whether that kind of work was extensively carried on by the defendant during that time or not.

A. It was extensively carried on at that time by the defendant.

The witness is here offered for cross-examination.

The further hearing in this matter was adjourned by the examiner to the 20th day of August, 1867, at 10 a. m., at the office of Norton & Cowen, in Troy.

1867, AUG. 5TH.

By the express stipulation of the counsel for the respective parties, to wit, M. P. Norton, esq., and R. M. Townsend, esq., the above matter was further adjourned to the 5th day of September, 1867, at 10 o'clock a. m., at the same place.

1867, SEPT. 5TH, *at* 10 *a. m.*

This matter was held open, by consent, to 3 o'clock p. m.

24 SEPTEMBER 5TH, 1867—3 *p. m.*

The parties, by their respective counsel, appeared, and thereupon

the witness, Charles G. Hill, was cross-examined by defendant's counsel as follows:

Cross-examination 1. How long a time were you working at the photograph business with the defendant Schoonmaker?

A. One year.

Cross. 2. Did you leave his employ at the end of the year referred to in your last answer?

A. I did; or within a few days of that time.

Cross. 3. Before you commenced the photograph business under the defendant, as you have stated, had you been working in the photograph business? and, if so, state how long.

A. I had worked at the photograph business before I engaged with defendant some thirteen or fourteen years.

Cross. 4. Will you name the places where you had worked before you were employed by defendant at Troy?

A. I had carried on the business for myself, and most of the time in the State of Massachusetts, in the city of Lynn. I was there for the last year's before coming to Troy and previously to that I was traveling about the country, and operating where I went.

Cross. 5. Were you familiar with the various modes of making photographic pictures generally used by operators through this country, before you went into the employ of the defendant, as you have before stated?

A. I was.

Cross. 6. Was you, during those years that you referred to in your last answers, a practical operator in making photographic pictures?

A. I was.

Cross. 7. Were you during the years last referred to by you acquainted with the various machines in general use among photographic operators in the country, and the mode of operating said machines in making photographic pictures; and, also, were you acquainted with the principles on which said machines were operated in making such pictures?

A. I was.

Cross. 8. Did you ever see, prior to your going into the employ of the defendant, as you have before stated, a machine for making photographic pictures that was used while making the pictures with a sliding plate-holder?

A. I had.

Cross. 9. State when and where you had seen the machine for making photographic pictures, which was operated with a sliding plate-holder, as mentioned in your last answer. State the time and place, as near as you can remember; and also state the name of the person or persons or firms who used said photographic machine with such sliding plate-holder. I mean a sliding plate-holder that made more than one picture without removing it from the camera box.

A. I had seen them in Boston, Lynn, and Salem, in the State of Massachusetts, and they were used in almost all of the cities of the Eastern States. They were used earlier than 1855 and 1856. I think William Snell, of Salem, used them there before 1855, but I can't tell within a year or two when he used them.

(Plaintiff's counsel objects to the last answer, and moves that it be stricken out upon the ground that defendants have not given notice in their answer that said invention was used by William Snell, or at Salem, Massachusetts.

Defendant's counsel objects to the plaintiff's motion to strike out the

answer on the ground that defendant's answer fully authorizes the proof.

The counsel for plaintiff objects to any further answer of the last question by the witness, unless the answer shall relate to the use
26 of the invention by such persons and at such places as are specified in defendant's answer in this suit.)

The witness further answers to the last question as follows: Such plate-holders were used by Masury & Silsbee, of Boston, Massachusetts, in 1854 or 1855, I think; also by McKinney, of Biddeford, in Maine; also by McKinney, of Portland, in the same State; also by Ellis, of Worcester, Massachusetts. I don't think of any others now, but they were used by a good many others. Most of the persons I have named used them earlier than 1855, I think. I used it as early as 1856, I think, at Lynn, Massachusetts.

Cross. 10. State how long you used the sliding plate-holder that made more than one picture without removing it from the camera box, which you referred to in your last answer.

A. I have used it occasionally ever since; that is, since 1856.

Cross. 11. Did you in 1856 make photographic pictures with the sliding plate referred to in your last answer?

A. I did.

Cross. 12. About how many photographic pictures did you make in 1856 with such sliding plate, as referred to in your last answer? State as near as you can.

A. I cannot state how many; I made but very few; I made pictures of my own family; I never sold but a very few of that make.

Cross. 13. Did you, when a traveling photographic picture-maker, as you have described in your answer herein, find, among photographic operators, the sliding plate-holder which made more than one photographic picture without withdrawing the plate-holder from the camera box in general use?

A. I did not.

Cross. 14. What proportion of photographic operators did you
27 find, when you were a traveling operator, as you have hereinbefore stated, used said sliding plate-holder referred to in your last answer?

A. It was not used at that time to any extent.

Cross. 15. Name the exact years that you was engaged as a traveling photographic operator, as you have described in your previous answers.

A. In 1852 & 1853, and I am not sure but in 1851 also.

Cross. 16. How early did you first see such sliding plate-holder, as referred to in your last answers, used in making pictures. State as nearly as you can.

A. I think as early as 1854.

Cross. 17. Were not the principles on which the several sliding plate-holders, which you have stated in your previous answers you have seen in use in the New England States, substantially the same in their construction and mode of operation in making photographic pictures, as claimed by the plaintiff in his patent and specifications referred to in his complaint herein?

A. They produced the same effect.

Cross. 18. In your direct examination, in answering as to the amount or value of the defendant's photographing per week, in which you stated that it amounted to from $130 to $200 per week of the pictures made, as per Exhibit D, Wing, were you correct in your estimate of such amount, or do you wish to modify your statement?

A. The statement made by me, as referred to, was not correct; the

amount I stated, as received by defendant, was for all kinds of work done by him, as well by other processes as by the one by which Exhibit D, Wing, was produced.

Cross. 19. Have you any certain, positive, or accurate knowledge of how much photographing the defendant did per week at the time you refer to on that subject in your direct examination, made up of the work performed after the manner indicated by Exhibit D, Wing, or by the other modes of the defendant's work at that time?

28 A. I have no accurate, positive knowledge on the subject.

Cross. 20. In giving your answer as to the amount of work done by the defendant per week, was the amount given by you mere guess-work?

A. Yes, it was; in one sense of the word.

Cross. 21. Have you any knowledge of the amount of work done by the defendant from your own examination of his books?

A. No, I had not; I had other means of knowing about it.

(The last clause of the last answer is objected to by defendant's counsel as not responsive to the question, and therefore improper, and should be stricken out.)

Cross. 22. State how you know, if you do know, that the photographic pictures, referred to by you in your direct examination herein, and marked Exhibit D, Wing, were made by the defendant or at his gallery.

A. I know it, because I made it.

Cross. 23. State how the pictures marked Exhibit D, Wing, came here into court.

A. That I can't tell.

Cross. 24. When did you last see said pictures, if you ever saw them, before you saw them in court when on your direct examination?

A. I never saw them since I made them until I saw them here at the time of my direct examination.

Cross. 25. What did you do with said pictures after you made them, if you ever did make them, and to whom did you deliver them, if you ever delivered them to anybody?

A. I carried them into the finishing-room of defendant's gallery and left them there to be finished; I have not seen them since then.

Cross. 26. Is there any mark upon the pictures, Exhibit D, Wing, put upon them by you to enable you to identify them, and dis-
29 tinguish them from other pictures made of the same person, of the same size, and in the same way?

A. There is not.

Cross. 27. How can you distinguish these pictures, Exhibit D, Wing, from others made of the same person, upon the same kind of plate, and pictures made of the same size and in the same way that these are?

A. Because I had one picture left of the same size and position, and of the same person; there were others cut off from this plate.

Cross. 28. Did you cut off said other pictures from this plate, referred to in your last answer?

A. I did not.

Cross. 29. Who did cut them off, and when and where?

A. I do not know who cut them off, or when, but they were cut off at defendant's gallery.

Cross. 30. Did you see them cut off?

A. No.

Cross. 31. How do you know, then, that they were cut off?

A. Because I found four of them in the work-room soon after the customer left.

Cross. 32. What did you do with said four when you found them?

(Plaintiff's counsel objects to the continuance of this line of examination as immaterial and wasting the time of the commissioner, counsel, and witness, without any possible object.)

Witness answers to last question:

A. One of them I reserved for myself, and the others were thrown into a waste-box at the gallery.

Cross. 33. What has become of the one you reserved?

A. The one I reserved is Exhibit E, Wing, in evidence in this case.

Cross. 34. Did you keep possession of the one Exhibit E, Wing, until your direct examination in this case?

30 A. I did.

Cross. 35. Did you ever show it to the plaintiff or counsel before this suit was commenced?

A. I never showed it to them until the day of my direct examination in this case.

Cross. 36. Did you not inform the plaintiff, or his counsel, before the commencement of this suit, of the existence of Exhibit D, Wing, or of Exhibit E, Wing, or of similar work, as being made at defendant's gallery?

A. No, I did not.

Cross. 37. Did not the plaintiff in this suit, Mr. Wing, ever ask you, if pictures made with a sliding holder were made in the defendant's gallery?

A. I cannot say whether he has or not.

Cross. 38. Have you not had difficulties with the defendant arising out of settlements or otherwise?

A. I have.

Cross. 39. In those difficulties you had with the defendant, did you not get quite angry with him?

A. I did.

Cross. 40. Did you not on one occasion, on the morning of your final settlement with Schoonmaker, threaten him, in the presence of Mr. Burgess, and say in substance, that you had a turn on the defendant, that you would yet punish him, or bring him up, or words to that effect?

(Plaintiff's counsel objects to the last question on the ground that the witness has already stated that there was an ill-feeling by him against the defendant, and that he has no right to question witness in regard to particular transactions unconnected with this suit.)

A. I did not say anything of the kind, or any words to that effect.

Cross. 41. What did you say on that occasion to the defendant, or of him, scolding him or threatening him, or in substance that?

31 (Plaintiff's counsel objects to last question as wholly immaterial, and advises the witness that he need not answer it unless he chooses.

The witness declines to answer the question.)

Cross. 42. What did you say to the defendant on the occasion referred to in the two last questions?

(Plaintiff's counsel make some objections [illegible]

The witness declines to answer the last question.)

Matter adjourned, by consent of counsel, to the 6th day of September 1876, at 9½ a. m., at same place.

SEPTEMBER 6TH, 9½ a. m., 1876.

The parties, by their counsel, appeared before the commissioner at the

means of examining the system, to see whether his statement is true or not, and having it ready for illegal and improper purposes.)

A. I sold the defendant a camera of that description in the fall of 1881.

Re. 7. At that time, and attending the sale of the camera mentioned in your last answer, was there anything said between you and the defendant in regard to any patent on that camera; and, if so, what was said?

(Defendant's counsel objects to the last question as calling for immaterial testimony.)

A. There was. At the time I sold the camera to the defendant, I told him he must run his own risk in using it in regard to the patent. Defendant did not consider the patent of any avail, and purchased the camera and went on to use it.

(Defendant's counsel objects to the latter clause of the lyst answer, as to what the defendant considered, and asks to have it stricken out, on the ground that it is not responsive to the question, and that it expresses only the opinion of the witness as to what the defendant thought.)

Re. 8. What and whose patent had you reference to in your last answer—I mean who was the inventor; and who was then and is now the owner of it, so far as you may have any knowledge?

(Defendant's counsel objects to the last question, on the ground that it called for immaterial testimony and also illegal testimony, and
34 on the ground that in the answer of the witness as to the conversation with the defendant, at the time the witness alleges he sold the camera to the defendant, it does not appear from the evidence that the defendant knew or was informed, by the witness or otherwise, that said camera so alleged to have been sold to the defendant was covered by or was an infringement upon any particular patent, made known to the defendant by this witness or otherwise. Therefore it is immaterial as to what camera this witness in his own mind referred to.)

A. Southwick and Hawes were the inventors, and Wing invented the camera box; and Wing was then, and, I believe, now is, the owner of it and the patent.

Re. 9. When you, as stated in your answer to question No. 7 of your re-direct examination, stated to the defendant that he must take his own risk in the purchase and use of the invention in suit, what reply, if any, did the defendant make?

(Defendant's counsel objects to the last question as immaterial.)

A. I cannot recollect the precise words that the defendant used,—it was some three years ago—but he said he did not regard the patent as good for anything, and that he would take it at his own risk, or words to that effect.

Re. 10. What did you tell the defendant, at the time you sold him this camera, in regard to the invention being patented, if anything?

(Defendant's counsel objects to the last question on the ground that it calls for immaterial testimony, and on the ground that the witness has been previously examined herein by the plaintiff's counsel in reference to that conversation.)

A. I told him I had one of Wing's patent camera boxes, a multiplying one, that I wished to dispose of. I told him it was an infringement of the patent owned by Wing, and with that information he bought it of me.

35 Re. 11. Did that multiplying camera box contain the invention described in and covered by the patent in suit, and about which

patent you were examined on your direct examination by the production of certified copies thereof?

A. It did.

CHA'S G. HILL.

Further cross-examination of witness suspended.

It is understood by the counsel for the respective parties that the defendant's counsel may reserve the cross-examination of last witness should he desire to do so.

Subscribed and sworn to this 6th day of September, 1867.

JOHN T. LAMPORT,
U. S. Com. and Ex'm'r for North'n Dist. of N. Y.

The plaintiff's council here rest their prima facie case.

On this 19th day of September, 1867, the counsel for the respective parties appeared before the examiner at the same place, and the counsel for the defendant recalled—

Charles G. Hill as a witness, who, on his cross-examination, further testifies as follows:

Re-cross. 1. Did you ever examine the original patent of Albert S. Southworth, referred to in this suit?

A. No.

Re-cross. 2. Did you ever examine any copy, true copy, of said patent before you came to the court to be examined as a witness in this case?

36 A. No.

Re-cross. 3. Did you examine at all the said patent before you were sworn as a witness in this cause, and on the day you were examined? I refer to what is called in this case Exhibit B, Wing.

A. I cannot tell whether I examined it before I was sworn or not, but I did examine it on that day, I think.

Re-cross. 4. Did you ever make any other examination of Exhibit B, Wing, except at the time and on the occasion you have referred to in your last answer?

A. I think I examined it twice during this examination, and in this room; but I cannot state at what time. I think it was during the time I was being examined or cross-examined in this case.

Re-cross. 5. Will you swear positively that you examined Exhibit B, Wing, more than once during your examination as a witness in this case?

A. I will.

Re-cross. 6. Describe particularly how pictures are made, according to the specifications and drawings and manner of operating the plate-holder, as claimed and described in Exhibit B, Wing.

A. They were made with a diaphraghm arranged in the plate-holder or camera box in such a manner as to make one or more picture at a time on a plate, with one tube. There are various ways of doing this; that is, of arranging in the plate-holder or camera box. It can be done in either.

Re-cross. 7. Is that the whole of the description, as you understand it?

A. It is.

Re-cross. 8. In the examination of Exhibit B, Wing, which you have spoken of in your testimony on your cross-examination, did you make a

short and partial examination of the specifications and drawings,
37 or was it a long and full examination, which enabled you fully to understand and describe the details of specifications and the several steps in the mode of making pictures by said invention?

A. I made a short examination of it.

Re-cross. 9. How did you know that the camera boxes that you testified to on your direct examination herein, and the apparatus connected therewith, were the same in construction and manner of making pictures as Southworth's patent, if you had never examined that patent prior to your examination here?

A. I knew it from information I had received from various parties, and from instruments that I had seen, which produced the same effect by making one or more pictures on one plate.

Re-cross. 10. All you knew about this matter, referred to in your last answer, was not from actual knowledge, but from hearsay only, was it?

A. No; it was from actual knowledge.

Re-cross. 11. What was that actual knowledge of the camera boxes and apparatus connected therewith, referred to in your direct examination herein, being the same as the invention described in the Exhibit B, Wing, when you had never seen the patent before the time of your examination here?

(Plaintiff's counsel objects to the last question upon the ground that it assumes that the witness had never seen the patent, when he swears that he had twice examined a certified copy of it at the time of his direct examination.

And further, that the question should designate what part of witness' direct examination is referred to.)

A. It was knowledge that I had acquired by reading the papers, and by seeing instruments of that kind in operation.

Re-cross. 12. Was the camera box and apparatus connected
38 therewith, which in your direct examination you stated that you purchased and brought to Troy and sold to the defendant, was that of Wing's particular patent, or of Southworth's, as described in Exhibit B, Wing?

A. It combined both; that is, it was made under both patents, and bore the names of both Wing and Southworth, and the date of both patents.

Re-cross. 13. Have you ever seen Wing's patent, as [as] distinguished from Southworth's patent?

A. I don't know that there is any difference in them.

Re-cross. 14. Describe what part of the box and apparatus connected therewith, which you have testified you purchased and sold to the defendant, was made according to the Southworth patent in suit? And what part of it was made according to Wing's particular patent, referred to in your cross-examination? State particularly, so that we can see which part belongs to the one patent, and which to the other.

A. The Southworth part applies to the diaphragm, or any apparatus whereby one or more pictures are made on one plate with one tube; that is, as far as I know the Southworth goes. It would be hard for me to explain what part was made according to Wing's patent, without having the instrument before me to point it out or describe it. I don't know distinctly what Wing claims. He claimed improvements upon Southworth's patent, and brought them into general use.

The witness being again re-examined by the plaintiff's counsel, further testified as follows:

Re. 1. You speak of the diaphragm used in the box you sold to

Schoonmaker as being according to the Southworth patent. Have you any of the diaphragms used in that box with you? and, if so, produce them.

(Defendant's counsel objects to the last question because it calls for immaterial testimony.

2d. Because it calls for the use of diaphragms without asking whether they were used by the defendant or his order, or not.

39 3d. Because it does not confine the question to the diaphragms, if any, that were either received by the defendant, or used by him.)

A. I have, and here produce them.

Re. 2. State whether these diaphragms were actually sold to Schoonmaker by you, and whether or not they, or any of them, were used by him with the box.

A. They were sold to him, and were used there.

(Plaintiff's counsel here offers the diaphragms (4 in number) as exhibits in this case, and the examiner files and marks the same Exhibit F, Wing.)

Re. 3. I wish you to explain the manner in which these diaphragms were used in connection with the box sold by you to Schoonmaker.

A. They were fitted into a wooden frame placed at the back of the box, one at a time of course, the opening of the diaphragm directly opposite the center of the lens. The pictures were made, one at a time, by sliding the plate-holder backwards and forwards, and up and down, so that the different parts of the plate are exposed to the center of the lens, making from one to twenty-five pictures on one plate, with one tube.

Re. 4. Then, if I understand you correctly, the pictures were made by bringing different portions of the plate successively opposite the aperture in the diaphragm?

(Defendant's counsel objects to the last question as leading.)

2d. That it embodies substantially, in its language, the principle and material points in the plaintiff's patent, and calls for the answer of the witness affirming what the question suggests in the language of the patent.

A. They were.

Re. 5. How is the plate-holder moved over the diaphragm in the box which you sold to Schoonmaker?

40 (Defendant's counsel objects to the last question because it assumes that the plate-holder is moved over the diaphragm.)

A. It is moved by a little rack backward and forward, and called a rack and pinion, and is moved up and down by hand with a little spring that holds it in place.

Re. 6. What is the mode of indicating when the plate has reached the right point for taking a picture in the box you sold to Schoonmaker?

A. There are two brass cylinders, one in the plate-holder, and the other attached to the box; the one in the plate-holder is horizontal, and the one in the box is perpendicular, with small holes drilled in each; opposite each row of holes are numbers indicating the number of pictures taken on a plate, and corresponding with the diaphragms produced here; attached to the box are little pins, with a spring that holds the plate in the proper place; these pins drop into the holes in the cylinders, as the plate-holder moves up and down, to make the various number of pictures on a plate.

Re. 7. Whose invention were these devices for moving and guaging the plate-holder?

A. They were Wing's.

The witness, being again cross-examined by the defendant's counsel, further testified as follows:

Re-cross. 15. Examine Exhibit B, Wing, and state whether there is any diaphragm in Southworth's patent, or the reissue of it.

A. I have examined it, and state there is a diaphragm in it.

Re-cross. 16. Point out the diaphragm in Exhibit B, Wing, and the letter or figure that it is marked by.

A. I point it out by stating that it is marked by the letter C in the drawing.

CHA'S G. HILL.

Subscribed and sworn to this 19th day of September, 1867.

JOHN T. LAMPORT,
U. S. Com. and Ex'r for the Northern Dist. of N. Y.

41 Circuit court of the United States for the northern district of New York.

SIMON WING
vs.
C. C. SCHOONMAKER. } In equity.

UNITED STATES OF AMERICA, *District of Massachusetts:*

On the 12th day of May, 1868, appeared before me, Winslow Warren, jr., U. S. commissioner, Alvin Clark; on 13th day of May, Ethan W. Coburn and Josiah J. Hawes; on 14th day of May, said Josiah J. Hawes and Nancy M. Hawes, and Albert S. Southworth; and on 15th day of May, said Albert S. Southworth and Simon Wing, witnesses for the complainant in the above-entitled suit, and being by me first carefully examined, cautioned, and sworn to testify the whole truth relative to the issue, did depose and say, in answer to interrogatories proposed by E. Cowen, esq., counsel for plaintiff, and to cross-interrogatories proposed by R. M. Townsend, esq., counsel for defendant, as follows, viz:

The deposition of Alvin Clark, taken and subscribed, and sworn to May 5, 1868, before me.

WINSLOW WARREN, JR.,
Examiner.

Direct examination by E. Cowen, esq., counsel for complainant.

Interrogation 1. What is your name, age, residence, and occupation?

Answer. My name is Alvin Clark; age, sixty-four; I reside in Cambridgeport, Mass.; I am an optician.

Int. 2. Please state the opportunity you have had to become acquainted with the manufacture of lenses and optical instruments, and their operation, and also what acquaintance you have had with the art of photographing.

42 A. I have been employed in making lenses for telescopes, and some for photographic purposes, for over twenty years; the making of telescopes has been my chief occupation; something like twenty years since I have practiced photographing, to a little extent, on silver plates; I never made myself acquainted with the processes upon paper or tin; the largest lens I ever worked was eighteen and a half inches in diameter, and is now in the observatory in Chicago.

Int. 3. State whether or not you have studied the effects of light in passing through lenses of different shapes and sizes, and in different positions.

A. I have.

Int. 4. Extensively or otherwise?

A. I am familiar with all the effects, as a working optician must make himself familiar with the effects or functions of a lens under all conceivable circumstances.

Int. 5. Have you read the reissued letters-patent introduced in evidence in this cause and marked Exhibit B, Wing, and, if so, do you understand the principle and mode of operation of the invention described in said letters-patent?

A. I have read and examined the reissued letters-patent, and think I understand them; I understand the principle and mode of operation of the invention therein described.

Int. 6. Please examine the camera box now shown you and marked Exhibit O, Schoonmaker, and state whether or not you understand the principle or mode of operation of the same in taking pictures.

A. I believe I understand it.

Int. 7. State whether or not, in your opinion, the camera box and apparatus, marked Exhibit O, Schoonmaker, is the same or substantially the same, as the apparatus described in the reissued letters-patent marked Exhibit B, Wing, and state the reason for your opinion.

A. I should say they were essentially different, inasmuch as in Exhibit O, Schoonmaker, one-half, exactly, of the effective field is
43 discarded or cut off, and the half which is employed all lies to one side of the axis of the instrument, under which circumstances the picture produced can never have the perfection of one in which the centre of the picture is near the optical axis of the instrument; or, in other words, Exhibit O produces but half a picture, while the other may be employed to produce a small picture, or may be employed to produce a picture the full extent of the effective field in size.

Int. 8. What is the operation of Mr. Southworth's invention in regard to taking pictures in the optical axis of the lens?

A. The optical axis of the lens may be made to fall centrally upon his picture or upon any other portion which he may choose, and that in each and every case, to whatever extent he may multiply his tubes or apertures.

Int. 9. What is the difference between the two instruments as regards the position of the object or sitter?

A. If you were to point Exhibit O directly or centrally at a person to take a picture you would find one-half of this person pictured but the other half missing; while with the instrument described in the patent you would produce the ordinary photograph.

Int. 10. Where, then, is it necessary for such a person to be located with reference to the tube or lens in using Exhibit O?

A. With that instrument he must be placed several degrees to one side of the line of the tube.

Int. 11. And what will be the effect upon pictures so produced?

A. The foreshortening of the plate and the imperfection in the focus upon the different parts of the plate will result in a measure of imperfection.

Int. 12. Please state the difference between the two machines in regard to the number of pictures which may be taken in each without removing the plate-holder from the box.

A. Exhibit O is designed, I believe, to produce but two pictures; in

the other, by multiplying the tubes and extent of the plate-holder,
44 hundreds may be taken without removing the plate-holder from the box.

Int. 13. What is the effect of covering one-half of the lens in the manner shown in Exhibit O, with regard to the diffusion of light over the exposed surface of the plate?

A. It is limited by one-half; you can cover only about one-half as much surface with Exhibit O, as it is, that you could if that screen were removed.

Int. 14. Will there be any difference in the degree of light falling upon that portion of the exposed surface next to the partition and that portion of the surface farthest from the partition?

A. We should have the full effect of the light if the partition or screen were close to the plate, even up to the very edge of the screen, but as this screen stands at some little distance from the plate there is a penumbra or gradual falling-off of the light on the side next the partition.

Int. 15. And what would be the effect of that on the picture?

A. Nothing but the darkness at the edge—it would produce no displacement or distortion of objects; I would state that the penumbra at the other edge of the picture, or gradual failing of the light, is much broader in consequence of the light being cut off by the tube itself at a greater distance from the plate.

Int. 16. You have stated that a picture taken upon the side of the lens instead of in the optical axis of the lens will be imperfect or distorted, please give the scientific reason for this imperfection or distortion.

(Objected to by defendant's counsel on the ground that the question assumes certain facts as proved or testified to by witness, and it recites what purports to be the language of the witness in his testimony, which is illegal and improper.)

A. There are several. I will name, first, what has already been alluded to, the penumbra surrounding the marginal portions of the pic-
45 ture; next, a slight imperfection in the sharpness of the image formed by rays passing obliquely through the lens; another, the foreshortening of the plate as you recede from the axis of the instrument. I will state further, this distortion from foreshortening of the plate could not be counted an imperfection were the pictures always to be viewed from the same direction and distance at which the lens was located when the picture was taken, because the plate would then be foreshortened to the eye of the observer in the same way that it was to the lenses of the camera at the time it was taken.

Int. 17. Suppose the object so placed at one side of the tube and taken out of the axis of the lens to be a perfect sphere, what would be the shape of the picture?

A. If measured upon the paper or plate I believe it would be an ellipse, but if viewed at the same angle or obliquity at which it was taken, or the observer's eye brought into the position of the lenses, it would have the effect of the sphere still; or perhaps I should have stated the picture will have the effect of the sphere still.

Int. 18. Suppose that a picture of the same sphere should be taken in the optical axis of the lens, as in the Southworth's instrument, what would be the shape of the picture?

A. It would be circular.

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 1. Have you ever been a practical photographer?

A. I practiced, to a limited extent, the taking of daguerreotype pictures when the silver plates were used, but have never acquainted myself with the processes now in more general use.

Cross. 2. How long ago was it that you made what pictures you did make?

A. From twenty to twenty-five years ago.

Cross. 3. Have you ever worked at the business of making
46 photographic pictures, or carried on the business of making such pictures or selling the same?

A. Never.

Cross. 4. Have you any knowledge of photographing by actual practice in that business, except as a matter of amusement, and that some twenty or twenty-five years since?

A. At the time photography was invented or discovered I was employed, in this city, as a portrait-painter, making that my business; I very early learned that we could obtain very essential aid from photographs in the painting of portraits, and I painted a great number of portraits from photographs; where people had died their friends employed me to paint a great number of portraits from them; that practice I have continued up to the present time, to some extent; by such labors I have been made critically conversant with photographic effects of light and shade; I have had no personal experience except from such observation.

Cross. 5. Who taught you practically what you did learn of photography, as a matter of amusement, some twenty or twenty-five years ago, as you have before stated?

A. I purchased my instrument and stock, my supplies, from Mr. Albert S. Southworth, and he taught me practically the use of them.

Cross. 6. Is the Mr. Albert S. Southworth, named in your last answer, the patentee of the patent referred to in your testimony on your direct examination to-day?

A. It appears, by the Exhibit B, Wing, he is.

Cross. 7. Have you been on intimate terms and well acquainted with said Southworth, up to this time, since he taught you photography, as you have herein stated?

A. I have been in the habit of meeting him occasionally; always been on speaking terms with him; not so intimate as with many people; but I cannot deny I have known him well.

Cross. 8. Have you been on intimate terms with Mr. Wing, the plaintiff herein, for some time past?

47 A. I never saw him but once until to-day.

Cross. 9. Did you ever make any photographic instrument?

A. I have.

Cross. 10. When, and where, and how many?

A. I should not be able to recall the dates of them; they were made in Cambridgeport; one about nine inches diameter, made for Whipple & Black, of Boston; another of about five inches in diameter, for the same parties; and three or four smaller ones for different parties; that is the extent of my operations in that line.

Cross. 11. State, as nearly as you can, the time you so made said instruments.

A. They were made along in different years; I should think from fifteen to eighteen years ago.

Cross. 12. Do you swear positively that you made any of said instruments within twenty years last past?

A. I am not able to connect that work with anything else, and there has so much time passed I can not swear positively that it was within twenty years.

Cross. 13. Will you not get that shadow or penumbra, spoken of in your direct examination, with any instrument if it is used to cover a larger space on the plate than it has field of lens?

A. The field always terminates with a penumbra at the edges, whether larger or smaller; you will get that shadow or penumbra with any instrument.

Cross. 14. Would you not get the same imperfection of shadow or distortion, spoken of in your direct examination, with any instrument overstrained or required to cover more space on the plate than it has field?

A. You would.

Cross. 15. With lenses large enough, so that their field would not be overtaxed or overstrained, would not a perfect picture be made with part of the lens screened off?

A. You can enlarge and improve the perfection of the image by screening off a part of the lens if you do it the right way, that is, by a circular screen midway between the lenses, but if you screen off
48 the field by a screen near the picture a corresponding reduction of area in the picture must ensue.

Cross. 16. In practice do not photographers, in making pictures, sometimes put a screen before the front lens to reduce the area or strengthen the field?

A. They sometimes put a screen before the front lens for those purposes.

Cross. 17. Did you ever see Exhibit O, Schoonmaker, before to-day, and did you ever make any pictures with it or with such an instrument?

A. Never.

Direct examination resumed.

Direct 19. What kind of a screen is it that photographers put before a front lens to reduce the area?

A. I have seen them formed of pasteboard with an elliptic perforation and not made stationary, but in the hand of the operator or assistant, about midway between the sitter and the instrument, they are kept in motion during the sitting for the purpose of blending or destroying the visible outline.

Direct 20. By the use of any of these screens that you have mentioned is the image thrown to one side of the optical axis of the lens?

A. I have never seen any screening or diaphraghming for one-sided operations except Exhibit O.

Direct 21. Will you please explain what you mean by penumbra.

A. The part, part shadow and part light; all the space between where the light begins to fade and where it is lost wholly.

ALVIN CLARK.

The deposition of Ethan N. Coburn, taken, subscribed, and sworn to May 13, 1868, before me.

WINSLOW WARREN, JR., *Examiner.*

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 1. Have you ever been a practical photographer?

A. I practiced, to a limited extent, the taking of daguerreotype pictures when the silver plates were used, but have never acquainted myself with the processes now in more general use.

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Direct examination resumed.

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ALVIN CLARK.

The deposition of Ethan N. Coburn, taken, subscribed, and sworn to May 13, 1868, before me.

WINSLOW WARREN, JR., *Examiner.*

49 *Direct examination by E. Cowen, esq., counsel for complainant.*

Interrogation 1. State your name, age, residence, and occupation.

Answer. My name is Ethan N. Coburn; residence, Charleston, Mass.; age, forty-seven; I am now a funeral undertaker.

Int. 2. Do you know Albert S. Southworth, of Boston, Mass.; and, if so, how long have you known him?

A. I know him, and have known him intimately since 1844; previous to that I had some knowledge of him, not so intimate as since.

Int. 3. Were you ever in the employment of Mr. Southworth; if so, when, in what capacity, and how long did you continue in such employment?

A. I have been in his employment from the early part of the year 1845, the first month of the year. I was continuously in his employment a year from that time, in the capacity of manufacturing daguerrotype apparatus.

Int. 4. Were you in his employ subsequent to the time you have mentioned; and, if so, when and how long?

A. I was; I should be unable to say definitely how large a portion of the time, but from March, 1846, until the fall of 1847. I was a portion of the time in his employ in the same business.

(Complainant here offers in evidence a portion of a camera box, with wings attached. Defendant's counsel objects to the introduction of the last-named portion of camera box in evidence, or to any proof in relation to the same, first, as immaterial; second, as incompetent and illegal; third, that if this evidence shall be deemed material, it cannot be received at this stage of the proof in this case, because the plaintiff has given and introduced his proof herein and rested his case, and cannot now, after the defendant has gone into his proof, reopen his proof and give evidence to sustain his case, nor give evidence to make
50 a new case; he can now give only rebutting testimony. Exhibit received, and marked "Exhibit A 1;" Wing vs. Schoonmaker, W. Warren, Jr., Examiner.)

Int. 5. Look at Exhibit A 1, now shown you, and say when and where you first saw the same.

(Objection as last before.)

A. I should say that I first saw it, as near as my memory may serve me, in August, 1866, at Thetford, Vermont.

Int. 6. What was the nature of your connection with that machine?

(Objected to as before.)

A. I was the manufacturer of the box.

Int. 7. By whose direction did you make it?

(Objected to as before; and also the further objection that the question assumes that the witness made said machine by somebody's direction, which is not proven.)

A. By direction of Albert S. Southworth.

Int. 8. In whose employment were you at that time?

(Objection as before as to 5th int.)

A. In Albert S. Southworth's; 'twas during that period of partial employment.

Int. 9. What was the object of this machine; for what was it to be used?

(Objected to as to 5th int.; and also that the witness cannot give the object or intent of the use of said machine by Southworth except as he learned this intent or object from Southworth, which is hearsay, and Southworth is the best witness.)

A. From my knowledge of the daguerreotype business, daily, almost daily, frequenting their operating-rooms during the year previous; this having the accompaniments of a daguerreotype box, and I would say, as exhibited here, it is incomplete. I should say it was used for the purpose of taking daguerreotype pictures.

Int. 10. At the time Mr. Southworth directed you to make it, did he state to you how he proposed to use it or what it was for?

(Objected to as to 5th int., and also that it called for hearsay testimony.)

51 A. I am unable to say at this moment whether I received the impression from him at that time that it was for the purpose of multiplying pictures; that that was the object has been known to me for some time.

(Objected to as not responsive, and ask to have it struck out by respondent's counsel.)

Int. 11. Where was your residence at this time?

A. Thetford, Vermont.

Int. 12. When did you go to Thetford?

A. I think I left Boston in the month of March, 1846, for Thetford. I had previously resided at Boston.

Int. 13. How long did you remain at Thetford?

A. From the above March until the following April, 1847.

Int. 14. What was Mr. Southworth doing at Thetford?

A. He was there on a vacation.

Int 15. When did he go to Thetford, and when did he return to Boston, if at all?

(Objected to as to 5th int.)

A. I should think that he went in the month of August. He might have been there two or three weeks; I am not positive.

Int. 16. Was it while he was at Thetford he gave directions to make this camera box?

(Objections as to 5th int.)

A. It was.

Int. 17. Did you complete it while he was there?

(Objections as to 5th int.)

A. I did not.

Int. 18. When did you complete it?

(Objections as to 5th int.)

A. I am unable to say definitely; but I should say it was sent to him within a month or six weeks, in conpection with other boxes; it might have been longer.

Int. 19. You say you returned to Boston in April, 1847; did you continue to work for Mr. Southworth after your return?

(Objected to as to 5th int.)

A. I did, partially.

52 Int. 20. Did you reside in Thetford at any other time than the time you have mentioned?

(Objections as to 5th int.)

A. I had for quite a number of years previous to coming to Boston; I have not resided there since April, 1847.

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 16. Will you swear positively, from your present memory, that Albert S. Southworth ever gave you directions to make box marked Exhibit A 1, herein?

A. I will.

Cross. 26. What did you mean by saying to plaintiff's counsel herein just now when he put the question to you whether Albert S. Southworth gave you directions to make said box A 1, that you presumed he did?

(Objected to on the ground that it assumes witness made a reply which he did not make, and assumes plaintiff's counsel put a question which he did not put.)

A. I hav'n't answered that I presumed he gave me directions to make it.

Cross. 36. What did you in your answer say you presumed?

(Objected to as assuming the witness said he presumed.)

A. It don't occur to me that I have answered by way of presumption. If I have given any latitude with regard to the identity of the box it would come up with regard to its being the identical box, which I have no doubt it is; but as to its general form, it is identical with it.

Cross. 4. Will you swear positively that the box marked Exhibit A 1 is the identical box you say you made for Albert S. Southworth, in your direct examination?

A. (I will swear if it is not, it is a perfect model.) I say, in all frankness, I cannot swear positively, (but still I have no doubt.)

(Respondent's counsel objects to examiner's writing down anything that is not responsive; anything that the witness willfully thrusts
53 in that is not responsive, and objects to the parts of the answer in parentheses.)

Direct examination resumed.

Re-direct 1. Please give the reasons why you think Exhibit A 1 is the same box you made.

(Objected to as to 5th direct interrogation; and, second, that it calls for argumentative testimony rather than for facts.)

A. The manufacture of this box, in every corner, in the rounding of the corners, there is a guage run around as a guide for the finishing up of the round; and another evidence is its corresponding to a pattern which I looked up to-day, by which the dovetailing is cut.

ETHAN N. COBURN.

The deposition of Josiah J. Hawes, taken, subscribed, and sworn to May 13 and 14, 1868, before me.

WINSLOW WARREN, JR.,
Examiner.

Direct examination by E. Cowen, esq., counsel for complainant.

Interrogation 1. What is your name, age, residence, and occupation?

A. My name is Josiah J. Hawes; age is sixty; residence, 41 Irving street, Boston; I am a photographer.

Int. 2. How long have you been in the photograph business, or in business connected with photography?

A. I was one of the first that commenced the business, the year Mr. Gourod, the Frenchman, came over here; I think it was 1841.

Int. 3. Do you know Albert S. Southworth, and how long have you known him?

A. I know him; I have known him since 1843; been in partnership with him until 1861, I think.

54 (Objected to by respondent's counsel, as he objected to 5th interrogation in examination of witness Coburn.)

Int. 4. Are you acquainted with the patent of Mr. Southworth, obtained in 1855, for what is called the multiplying camera, and with the invention described therein?

A. I am.

Int. 5. What is the object of that invention, as you understand it?

(Objected to as last above, and also calling for the witness to state the object of the invention, when the way to prove that is by the patent itself, and its specifications and claims, which is better evidence than what this witness can state.)

A. The object, as I understood it to be, was the placing of a number of pictures on one plate without recoating it, for the purpose of saving time, and also for putting different members of a family on one plate; I should say those were all the objects I know anything about.

Int. 6. Do you know whether or not this multiplying camera of Mr. Southworth's invention is largely used by photographers at the present time?

(Objected to as to said 5th interrogation in Coburn's deposition; and, second, that it calls for immaterial testimony.)

A. From personal knowledge, I know nothing about it, except that I have used it and do use it.

Int. 7. Look at Exhibit A 1, now shown you, and state whether or not you recognize the same; and, if so, when and where you first saw it.

(Objected to as to int. 5, Coburn's deposition.)

A. The camera box is familiar to me; the first time I ever saw it was at our rooms, No. 19 Tremont Row; it was taken from a box of goods that came to us from Vermont; I should say in 1847, though I should have to refer to my books to identify the fact.

Int. 8. By "our rooms" you mean the rooms of yourself and Mr. Southworth?

(Objected to as before.)

55 A. I do; I speak of them as they were at that time.

Int. 9. Was the box, of which Exhibit A 1 is a part, ever used for taking daguerreotypes, to your knowledge?

(Objected to as before, and also that it is immaterial.)

A. I could not be positive that this box was ever used for that purpose, because I had another one made with a reflector in it, and one or the other was used, I can't say which.

Int. 10. When you first saw it, did it have the wings attached to it?

(Objection as to the last question.)

A. Yes, sir; it did.

Int. 11. At or about that time did you hear Mr. Southworth say anything as to the object of the box, or of these wings attached to it?

(Objected to as to 5th int., Coburn's deposition, and also that it calls for hearsay evidence, and it is immaterial.)

A. I think he explained the matter to me, but I couldn't now give any history of the explanation; it has entirely passed from me.

Int. 12. Do you remember where Mr. Southworth was during the summer of 1846; whether he was at home or not?

(Objected to as to 5th int., Coburn's deposition, and also that it is immaterial.)

A. From my books I could answer definitely; I know he was away a season either in 1846 or 1847, in Vermont; at least he was away from our rooms, and I suppose he was in Vermont.

Adjourned to May 16, 8½ a. m.

Int. 13. Please look at the articles now shown you and say whether

or not you recognize them, and, if so, when and where you first saw them.

(Objected to as to 5th int., Coburn's deposition.)

A. I recognize these as parts of an apparatus made at our rooms, 19 Tremont Row, where we were at that time; I should say in 1847,
56 although the date I cannot fix positively.

Int. 14. What was the object of the instrument to which you refer?

(Objected to as before, and also that it is immaterial; it calls for immaterial and incompetent testimony.)

A. The object was for making a number of pictures on the same plate by moving the lens over the plate.

Int. 15. Was it actually used for taking pictures, and, if so, by whom?

(Objected to as before to last interrogation.)

A. It was; by Mr. Southworth himself.

Int. 16. In what year did Mr. Southworth go to California?

(Objected to as to last interrogation.)

A. In 1849, I think.

Int. 17. How long was this camera used previous to this time; that is, before Mr. Southworth went to California?

(Objected to as to last interrogation, and also that question answers a fact not proved.)

A. It was used a number of months in our rooms at different times, but I can't specify the times exactly; it was in usable order until he went.

(Plaintiff's counsel here offered in evidence portions of camera box referred to by Mr. Hawes as being used by them at their rooms in 1847, as the witness thinks. Defendant's counsel objects to their being so offered, for the same reasons as to the Exhibit A 1, offered in Coburn's testimony, and renewed to the 5th int. in said testimony, and also as immaterial.)

Exhibits received, and marked Exhibits B 1, B 2, B 3, B 4, and B 5; Wing vs. Schoonmaker, W. Warren, jr., examiner.

Int. 18. What, if anything, was said between you and Mr. Southworth, at the time this camera box was made, in relation to procuring a patent for the same?

(Objected to as last before mentioned, and also that it calls for
57 conversations with persons not parties to the suit, and for hearsay testimony.)

A. The subject was talked over between us, and my impression is I rather dissuaded him from procuring a patent then, as there was not sufficient interest in the matter to make it pay, in my mind.

Int. 19. How long did the instrument of which Exhibits B 1 to B 5 are parts continued to be used or remain in a condition to be used?

(Objected to as to 5th int. in Coburn's deposition, and also that it calls for immaterial testimony.)

A. I think it was in a condition to be used until 1862, or 1863, or thereabouts; I cannot fix the date positively; at that time I took the front of the instrument, thinking it was useless, after the other thing was patented, to make some other instrument of.

Int. 20. How did the principle and operation of the instrument of which these exhibits are a part compare with the principle and operation of the machine patented by Mr. Southworth in 1855?

(Objected to as to 5th int. in Coburn's deposition, and also that it is immaterial; and, third, that it is introducing testimony as to a machine or instrument not in issue in this case.)

A. I should say the principle was the same, the result the same,

though the operation was different, this one moving the lens and the other the plate.

Int. 21. How much demand was there in the trade at that time—the time this patent was obtained—for instruments of this character?

(Objected to as to last interrogatory.)

A. The demand was very small with us, though I think there was considerable interest, people thinking the price was too high, and they could get along without it, and so the thing went along for some time.

Int. 22. When did a demand spring up for the instruments, and in respect to what kind of pictures?

(Objected to as last before.)

58 A. That's a question I am hardly able to answer; I should say somewhere near 1860, and for small pictures, for tintypes and ambrotypes, and small card-pictures, photographs.

Int. 23. You spoke of account-books which would enable you to fix, with more accuracy, the time when these two camera boxes were made; can you produce those books, and, if not, why not?

(Objected to as last before.)

A. I have looked for the books myself, supposing I had them, but found I have not, and my former partner, Mr. Southworth, undoubtedly has the books in which the accounts are; he is, I believe, in New Hampshire.

Int. 24. Have you any paper in your possession which shows where Mr. Southworth was in the summer of 1846?

(Objected to as last before.)

A. I received a letter from Vermont, from his sister, who was with him at the time, which would fix it; I presume it could be found, though I do not know now exactly where it is; this letter, from my former evidence, seems to have been dated August 22, 1846.

Int. 25. What is your present recollection on that subject?

(Objected to as last before.)

A. I should say that was correct as to the date.

Int. 26. Have you had occasion, within the last two or three years, to examine your account-book, and this letter, with reference to giving testimony in a suit upon this patent?

(Objected to as last before, and that it is immaterial.)

A. I have.

Int. 27. With the aid given you by such examination, what is your best recollection as to the time when you first saw Exhibit A 1, and the instruments of which Exhibits B 1 to B 5 are parts, at your rooms, as you have stated?

(Objected to as last before.)

A. I should say the one marked A 1, with the wings, was in the fall of 1846, and the other in 1847.

59 Int. 28. Where was Mr. Southworth, your partner, in the summer of 1847?

(Objected to as last before, and also that this question has been put and answered by witness.)

A. I think for a few weeks he was in Philadelphia; I can't say how long, and that he returned the latter part of the summer or fall to his rooms.

Int. 29. Do you remember the time when the fair of the Mass. Charitable Mechanic Association was held?

(Objected to as last before, and that it calls for immaterial testimony.

A. The date of the commencement of the fair I [I] couldn't fix, though I think it was November 10th, 1847, though I am not certain about it now.

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 1. Can you state with any certainty how long did the instruments, of which Exhibits B 1 to B 5 are parts, as referred to in your answer to the 19th int., continue to be used, or were in a condition to be used?

A. I don't recollect anything by which I can fix the date positively, though I know it was for quite a number of years in usable condition; when it was broken up I cannot tell.

Cross. 2. Look in your testimony given in the case of Simon Wing vs. Charles F. Richardson, in the circuit court of the United States, Massachusetts, in equity, and read interrogatory No. 10 to you, and your answer thereto, in which you swear in answer to said interrogatory, as follows: "I should say they were in a condition to be used until 1853 or 1854," and state whether that answer was correct as you then believed.

A. I should say that it was; have no reason to alter my opinion.

Cross. 3. Have you any special fact to fix the time when you first saw the exhibits you have been testifying about herein in your direct examination?

A. I don't think I have.

Cross. 4. Can you swear positively to the time when you first
60 saw the exhibits referred to in the last question and answer?

A. I should want to look over my books before I gave a positive answer to that. I think I could as to the first; as to the other I cannot. I mean, to the first one I think we have the date fixed on our books; as to the other, I could not, from the books—could not without seeing the man that made it, fix the date.

Cross. 5. Can you swear positively that Exhibit A 1 was ever completed or ever used?

A. I should be inclined to alter my testimony on that. I can't say whether this one was ever completed or used; there was another one exactly like it, except having a reflector inside which was used, and I don't know which of them were used; I think my testimony in the Richardson case was that this one was used, but there being two of them I can't say which was used; I know I used one of them myself.

Cross. 6. Was Exhibit A 1, or the other instrument in which in your last answer you say a reflector was put, ever completed so as to take more than one picture on a single plate?

A. I don't think they were; the other one was exactly like Exhibit A 1.

Cross. 7. For what purpose was Exhibit A 1 originally designed when first constructed so far as it was made?

A. I can only give my opinion of it; I cannot speak from positive knowledge; am unable to say.

Cross. 8. Have you examined the original patent of A. L. Southworth, marked Exhibit A, Wing, herein, and do you understand the principles and operation of the invention or instrument therein set forth?

A. I have examined it and believe I understand them.

Cross. 9. The plate therein is simply moved over the field of the lens, is it?

A. That is all, I believe, sir.

Cross. 10. Is there anything said in said patent about moving the lens over the plate?

A. I don't see anything there; there is nothing said.

61 Cross. 11. In the use of the instrument of which Exhibits B 1

to B 5 were parts, as you have stated in your direct examination, was there any movement of the plate?

A. No slide to the plate; the plate was not moved from its position except in being taken out and put back again, the plate was not moved but the plate-holder was taken out.

Cross. 12. In order to make more than one picture on a plate, had the plate-holder and plate to be taken from the camera box for each impression or picture made?

A. It had.

Cross. 13. Can you not by adding lenses enough make duplicate pictures faster and with more ease to the subject or sitter than by making them all with one lens and moving the plate or lens for each impression?

(Objected to as entirely immaterial.)

A. For a single position of a person it could be done with more ease by adding lenses, but for two positions or more it would be better to move.

Cross. 14. Suppose you want your pictures, each of two or three different positions, would it not be easier to make them with four lenses each time than to sit eight or twelve times for the same number of pictures with one lens; would it not be economy both in time to the operator and easier to the sitter to preserve a good expression for one or two sittings than for eight or twelve sittings?

A. It would be easier to make them with four lenses each time; it would be economy in time and easier to the sitter to preserve a good expression for one or two, than for eight or twelve, sittings.

Direct examination resumed.

Re-direct. 1. When you were examined in the case of Wing vs. Richardson, had you then examined your account-books with reference to the dates when you saw these exhibits?

A. Yes.

Re-direct 2. Is the principle of Southworth's invention confined to a single lens or may it just as well be used with a number of lenses?

62 (Objected to because it is secondary evidence, and that the best evidence on that subject is the patent itself with its specifications and claims.)

A. I suppose there is no reason why it should not be used just as well with a number of lenses as with a single lens; it is so used.

Cross-examination resumed.

Re-cross. 1. Were you not interested with your partner, your brother-in-law, A. S. Southworth, in the exhibits referred to in your testimony herein or in any made and operated on the principles covered in said exhibits, at the time you first saw them or subsequently?

A. As far as the invention goes there was nothing in it of my suggestion; when the patent was sold I had half of the profits; that was all the interest I had.

Re-cross. 2. You were partner in photograph business of A. S. Southworth, in 1846, 1847, and subsequent to that time, were you not? State the fact.

A. I was.

Re-cross. 3. Soon after you and your said partner introduced said exhibits into your photographic rooms in Boston, as you have testified, did

you not learn that other photographers in different parts of the country were using machines or instruments for making pictures operated on similar principles to said exhibits in their use?

(Objected to as calling for hearsay testimony.)

A. I never saw anything of the kind, and all that I know would be some notices in the newspapers about it; after 1852 or 1853, I think, there were some notices in the papers; I don't know.

Re-cross. 4. Did you not learn by newspapers or periodicals or otherwise of the use by other photographers of instruments similar to the exhibits referred to in your testimony herein, as early as 1850 or about that time? State the earliest period you remember.

(Objected to, first, that if the invention was described in a printed publication the publication should be produced; second, that notice of such publication should have been given in defendant's answer.)

63 A. I think that it couldn't be before 1851, for my partner was in California, and returned, I think, in the fall of 1851, and I certainly didn't know anything before that. I never saw any personally or heard of it from any other photographer.

Re-cross. 5. Did not your partner, Mr. Southworth, have the same facilities for learning what other photographers were doing in their art that you do?

(Objected to as silly.)

A. I think he did; after his return from California he did, and before, while there, probably he did not.

Re-cross. 6. Do you know whether you and your partner Southworth, or whether Southworth himself, ever published intention to patent the invention, embraced in the exhibits referred to in yonr testimony, prior to the application for a patent in 1855?

(Objected to as immaterial.)

A. As far as publishing in the papers goes we neither of us did, to my knowledge. I didn't and I don't know that he did.

J. J. HAWES.

The deposition of Mrs. Nancy N. Hawes taken, subscribed, and sworn to May 14, 1868, before me.

WINSLOW WARNER, JR.,
Examiner.

Direct examination by E. Cowen, esq., counsel for complainant.

Interrogation 1. Please state your name, age, and residence.

Answer. My name is Nancy N. Hawes; age, forty-eight; residence, Boston, Mass.

64 Int. 2. What is your relationship to Albert S. Southworth and to Josiah J. Hawes, members of the former firm of Southworth & Hawes?

A. A sister of Mr. Southworth, and wife of Mr. Hawes.

Int. 3. If you were, at any time, accustomed to assist them in their business as daguerreotypists, state during what period it was, where it was, and what you were accustomed to do.

A. I commenced assisting my brother in 1841, and was in the rooms constantly until after he went to California, in 1850, I think; except occasionally I was absent for a few weeks; I assisted in the operating-room in coloring pictures, and in waiting upon sitters, keeping the books, and writing, and in every part of picture-making, daguerreotyp-

ing; the partnership of Southworth & Hawes was formed while I was there.

Int. 4. State, if you know, where your brother Albert was during the summer and fall of 1846.

A. He was in Vermont in August and, I think, the first of September, and returned to Boston the first of September, I think.

Int. 5. Where was he in Vermont?

A. A part of the time in Vershire, and part of the time in West Fairlee.

Int. 6. How did you know that he was in Vermont?

(Objected to the same as to the 5th int. to Coburn, and also that it calls for immaterial testimony.)

A. I was there with him.

Int. 7. Do you know Ethan N. Coburn?

(Objected to as before.)

A. I do.

Int. 8. Do you know where he was at this time?

(Objected to as before.)

A. At Post Mill, Thetford, Vermont.

Int. 9. State whether or not, while you were in Vermont at this time, you saw your brother make a drawing of a camera; and, if so, what he said in relation to it, if anything.

65 (Objected to as before, and also that it calls for conversation with parties not in this suit, and it calls for hearsay, and that it is immaterial.)

A. I saw him penciling a drawing which he said he was going to take to Coburn to have a camera made.

Int. 10. How do you fix the time that you were in Vermont as August 1846?

(Objected to as to 5th int. of Coburn's, and also as immaterial.)

A. The most definite method I have is from a letter I have in my possession written from there, dated August 22, 1846. I was making pictures there; took a daguerreotype apparatus with me and spent a longer time than usual there; and from pictures that I made of some of my friends there at that time, I know definitely it was in 1846.

Int. 11. What, if anything, does the letter you speak of say about your brother's being there?

(Objected to as last, and also that it calls for hearsay and immaterial testimony.)

A. It says that he is in Vershire, and expected at West Fairlee.

Int. 12. Look at exhibit marked A 1, now shown you, and state whether you have seen it before; and, if so, when and where you first saw the same.

(Objected to same as to 5th int., Coburn's deposition, and also that it is immaterial.)

A. I have seen it before, I think; I have certainly seen it before. I saw it at our rooms on Tremont Row; I can't give the time when exactly; I think in the last of November, in 1846.

Int. 13. Do you remember in what manner it came to the rooms, whether with other articles or not?

(Objected to as before, and that it is immaterial.)

A. It came, with other cameras, from Post Mills, made by Coburn. I remember perfectly when it was unpacked; my brother took it out.

Int. 14. Will you please look at Exhibits B 1 to B 5, inclusive, and state whether you have seen them before; and, if so, when and where?

office of Messrs. Norton & Cowen, in Troy, and thereupon the cross-examination of Charles G. Hill was resumed as follows:

Cross. 43. Did you not, in a certain conversation with the defendant, or about him, at or about the time of your last settlement with the defendant, in the presence of Mr. Burgess, make some threat against the defendant, or use threatening words?

A. I decline answering the question unless obliged to. I am willing to answer any question that I can see has any bearing about the case.

(Defendant's counsel objects to the last part of the above answer as irrelevant and improper, and insists that it should be stricken out, as he objected to it before it was taken down by the commissioner.)

The witness was then re-examined by the plaintiff's counsel as follows:

Re. 1. On your cross-examination, the counsel for the defendant has attempted to prove by you that there has been and now is, matters of a personal character and of ill-feeling on your part towards this defendant; now, I desire you to state, whether such is the fact, and if it be so, whether there has been just cause for the same towards you, and
32 whether all such matters and things being true, you have become so prejudiced towards the defendant as to have stated, on your direct examination in this cause, matters and things, concerning the issues involved in the case, entirely untrue in fact?

A. There is and has been ill-feeling between us, and there is and has been just cause for such feeling on my part growing out of defendant's conduct and business transactions with me; but such feeling has not so prejudiced me against defendant as to cause me to make an entirely untrue statement on my direct examination.

Re. 2. You may state whether your feelings towards this defendant influenced you in any way, shape, or manner in your answers to the questions propounded to you on your direct examination, or any examination in the case, to state any matter or thing not true, in point of fact, or otherwise.

A. No; not in the least.

Re. 3. As a witness on the stand and under oath, for which have you the highest regard, your oath or any personal or ill feelings which you may have against the defendant?

A. For my oath, of course.

Re. 4. Would any personal feelings which you may have had, or now have, against the defendant, or anybody else, in any way or manner influence you to disregard that oath?

A. No, sir; not in the least.

Re. 5. On your cross-examination, you have testified that you saw in use in 1854 and 1855, cameras like or substantially like the one containing the invention described and set forth in the patent in suit; you may state, if you have any knowledge, who is the original and first inventor thereof.

A. Southwick & Hawes were the first inventors, and it was so known by that name at that time, or within a year or two of that time. Such cameras were very little used at that time.

33 Re. 6. Did you sell a camera to the defendant which contained the invention, or substantially the invention, described and claimed in the patent in suit; and, if so, when?

(Defendant's counsel objects to the last question because it calls for the opinion of the witness as to whether it contained the invention claimed by the plaintiff in this suit, without giving the camera, or the

circumstances by which I can fix the date I first saw them, positively, whether in 1846 or 1847," and that "I know these pictures were made before 1848, but there are no circumstances which enable me to fix the date, beyond general recollection?"

A. I did.

Cross. 7. Did you not then answer truly, as you then believed?

A. I did.

Cross. 8. Did you not in said last-named examination answer to cross-interrogatory No. 6, which is as follows: "Was the instruments of which exhibits referred to (meaning Exhibits B 1, to B 5) were parts, ever used in making pictures to the order of customers?" "I do not know?"

A. I did.

Cross. 9. Did you then, in that answer, answer truly as you then believed or now believe?

68 A. I did.

Cross. 10. Did you not visit or be in Vermont with your brother, Albert S., a number of times in the summer season, between 1844 and 1849?

A. Only twice; once in 1846, and in 1848 we were sent for on account of my father's sickness, and both went up together.

Cross. 11. In your said examination in Wing vs. Richardson, did you not answer cross-interrogatory No. 7, in reference to your visiting Vermont, that you did visit Vermont once in two or three years?

A. I did.

Cross. 12. In said last examination to cross-int. 8, and which is as follows: "Can you tell the year when you went to Vermont together?' did you not answer, "I cannot now tell?"

A. I did.

Cross. 13. In said last examination in Wing vs. Richardson, to cross-int. 9, which is as follows: "Was there anything peculiar in this visit made in 1846, of which you have testified?" did you not answer, "Nothing?"

A. I did.

Direct examination resumed.

Re-direct 1. Since you were examined in the case of Wing v. Richardson, have you had your attention particularly called to the dates of which you have been speaking; and, if so, on what occasion, and what measures did you take to verify those dates?

A. My attention was called to them a year ago last autumn, on occasion of giving testimony in a case; I don't remember the parties. I then examined our account-books thoroughly, and also looked up certain letters I had in my possession, and ascertained positively that I was in Vermont with my brother in 1846, and again in 1848; not in 1847 or 1849.

Cross-examination resumed.

69 Re-cross. 1. Was not your husband, Josiah J. Hawes, interested with your brother, Albert S. Southworth, in the Exhibits B 1 to B 5, and Exhibit A 1, mentioned herein, at the time, or subsequent, you say you first saw them? State the fact.

A. Not to my knowledge.

N. N. HAWES.

The deposition of Albert S. Southworth, taken, subscribed, and sworn to May 14 and 15, 1868, before me.

WINSLOW WARREN, JR., *Examiner.*

Direct examination by E. Cowen, esq., counsel for complainant.

Interrogation 1. State your name, age, residence, and occupation.

Answer. My name is Albert S. Southworth; age, fifty-seven; residence, Boston, Mass; my profession is photographing.

Int. 2. How long have you been employed as a photographer, and in business connected therewith?

A. Since the winter of 1839 and 1840, in February, up to the present time, most of the time.

Int. 3. State what your opportunities have been of gaining a practical knowledge of photographing in its various branches.

(Objected to same as to 5th int., Coburn's deposition.)

A. I should say very good, from the fact that I am now one of the very oldest, if not the oldest, operator in the United States; that I have constantly and diligently applied myself to the art and its branches, for most of the time since February, 1840; that I have been in communication with the oldest photographers in the country, on familiar terms with them; have made pictures for exhibition in competition with them, and myself and partner have frequently been the
70 successful competitors; commencing with the fair of the American Institute, in New York, in 1842 or 1843, I am not now certain which year, receiving the largest prize for the best work; and afterwards in several fairs by the Massachusetts Charitable Mechanics' Association, and other public exhibitions. I have been in communication with several of the most scientific men in the country on matters connected with my profession, such as chemists, manufacturers of materials for my profession, artisans, and others.

Int. 4. State whether or not you have been examined frequently as an expert in matters involving the science of photography, or some of its applications.

(Objected to as calling for immaterial testimony.)

A. I have been.

Int. 5. Look at the reissued letters-patent, marked Exhibit B, Wing, and state whether you are the patentee therein named, and the person who assigned the same to Marcus Ormsbee, and the complainant in this suit.

(Objected to the same as the last interrogation, and also as immaterial.)

A. I am the same person.

Int. 6. Look at the exhibit marked A 1, and state if you know when, under what circumstances, and for what purpose, the same was made.

(Objected to the same as the last int.)

A. This was made in August, 1846; the order was given then by me to Ethan N. Coburn, then at work for myself and partner, J. J. Hawes, in Post Mills Village, Thetford, Vermont. I went up there for a little leisure in hot weather, and likewise to see to his work, and to make a few pictures for my friends in that section. I was desirous of making pictures more rapidly than one at a time; gave him the order to make the camera with wings, so that the plate might be longer than usual, and be screened from the light while in a frame. I told him to use the ordinary ground glass, and make a little opening at the top so that the ground glass could be withdrawn. I did not then give him any directions

about a frame for holding the plate, leaving that for a future op-
71 portunity. In November following he sent me a packing-box filled with apparatus of different kinds; cameras of different sizes. He immediately came, within a few days, to Boston, and I paid him money on account for this work which I had ordered and he had been doing for us, and had come in the box. He very soon returned to Post Mills. I had another man at work for me on this sort of work at our rooms, or near, by the name of Stewart. On examining this piece of work, taking time to think it over, I saw that to use this fashioned instrument and furnish them would require all new cameras, and I desired to make in a cheap manner my idea of multiplying pictures; at a convenient time after this I employed Mr. Stewart to alter one of my old camera boxes to multiply pictures so as to accomplish the same idea.

Int. 7. Will you state what facts enable you to fix the time at which you gave directions to make Exhibit A 1, and the time at which you received it?

(Objected to as before.)

A. I fix the dates by my account-book, in the first place, likewise by the fact that the year following I was not in Vermont, but attending to the fair here, which took place in September, putting up pictures, &c. At that time I made a panorama of the city of Boston from the top of the State House. I know it was 1847, from my diplomas. I know it was not 1845, because it appears from my books Mr. Coburn was not then at work for me. I know it was 1846, from my sister being there with me, and assisting in operating. I know it was not 1848, for in the spring of 1848 I went with my sister to see my father, who was sick. I know from my books when I received the exhibit. From these dates and circumstances, as well as others, I fix the time precisely, but not from a recollection of the month or year itself as a date.

Int. 8. What was the entry to which you have last referred?

(Objected to as before, and that the entry on books is the best evidence.)

A. The entry was the date of the days of the month in Novem-
72 ber, and under it was the description of two or three different kinds of cameras received from E. N. Coburn; this camera was one of them.

Int. 9. You say that you directed Mr. Stewart to alter one of your old boxes so as to multiply pictures and accomplish the same idea; did he make such alteration?

(Objected to as before.)

A. He did, under my supervision.

Int. 10. Look at Exhibits B 1 to B 5, inclusive, and say what they are.

(Objected to as before.)

A. B 1 is the movable front to which the lens was attached. They are portions of the camera box which I directed Stewart to make, with its guage-marks and stops, whereby the movement was regulated; this was held in a frame surrounding it in such a way as to be moved between a front and rear covering, leaving a space, I think, eight and a half inches, or nearly that, square; seven and a half.

Int. 11. What was the object of the instrument of which Exhibits B 1 to B 5 are parts?

(Objected to as before.)

A. Its object was to make several pictures upon one plate in rapid succession, taking them in the axis of the lens, so as to get each picture in the best field of the lens, and all equally perfect.

Int. 12. Was this done by moving the plate over the field of the lens, or the lens over the plate?

(Objected to as before.)

A. It was done by moving the lens over the plate.

Int. 13. State the manner of taking the pictures in succession in the last-mentioned instrument.

(Objected to as before.)

A. I arranged Exhibits B 3, B 4, or B 5, or any similar ones, with larger or smaller openings, just forward of my slide in the frame, using the common plate-holder with these additional arrangements. I adjusted my picture to the center; after taking one picture according to its size I shut up my plate and moved my lens; on moving my lens I moved my board in front of the slide, and took another picture
73 having the opening opposite the lens, and so on, one after another, until I had covered my plate. After taking each picture, I drew up my plate-holder from the box, turned the board so as to change the aperture to a different part of the plate, and put it, the plate-holder, back again, always having a lens opposite the aperture by sliding it over the plate.

Int. 14. Will you please state what the object of placing these pieces were with the apertures in them, in front of the plate?

(Objected to as before.)

A. So as to expose only such part of the plates as I desire to use, and to protect such portions as I had used or not used from the light.

Int. 15. Did you actually use this last-mentioned instrument for the purpose of taken pictures; and, if so, how long?

(Objected to as before)

A. I did use it, made several pictures so as to prove it was a success, and used the instrument in its usual form for common work, not using this particular idea to any great extent, and considering it, and keeping it, a private matter. The instrument was used with that front for common purposes for several years; I can't say how many; perhaps seven or eight, or more.

Int. 16. Do you recollect any particular picture you made with that instrument, using the diaphragms?

(Objected to as before.)

A. I do; I made a picture of the young ladies connected with Miss Burrill's school in S. Boston, of a gentleman and his family, a merchant on Milk st.; of the parties in our own room; some of them engaged there.

Int. 17. If at the time of the construction of Exhibit A 1, or subsequently, you had any purpose or design in regard to procuring a patent, state what it was.

(Objected to as before, and that it is immaterial.)

A. I did design to procure a patent so soon as I could arrange it in a cheap form, so that it might be furnished to operators without being very expensive.

74 Int. 18. Prior to your application for a patent, what demand was there for instruments of this kind?

(Objected to as before.)

A. None whatever.

Int. 19. What facilities had you for knowing the wants of the trade at that time?

(Objected to as before.)

A. I was manufacturing and dealing in apparatus, furnishing it, both wholesale and retail.

Int. 20. When did you go to California, and when did you return?

(Objected to as before.)

A. I went the winter of 1848–'9—I think at that time the great California excitement broke out—and was absent two years lacking two months.

Int. 21. Please state how you fix the time that the instrument, of which Exhibits B 1 to B 5 are a part, was made in the year 1847?

(Objected to as before.)

A. Coburn went back immediately after receiving his money, in November, or first of December, to Vermont. That winter Stewart was working for me, and this is Stewart's work. The pictures of the young ladies were taken in the spring, before their vacation. I have pictures taken in 1848, which were taken after those experiments with the camera, and when I was using the camera for taking a head in a cloud in the centre of the plate. After making this arrangement, I made heads on a six and a half by eight and a half plate, in the centre of the plate, with an aperture in the centre of the slide similar to one of these, not exposing the surrounding parts of the plate. That kind of picture became very common in our establishment, and I commenced making them after this multiplying arrangement had been experimented upon. I have those pictures made in the winter of 1847 and 1848; several of them I can name, which shows me that an experiment with Mrs. Burrill's school-class must have been previous, and it could not have been the spring of 1846, because the order to make this camera A 1 had not
75 been given. That leads me to the conclusion that the experiments with this camera must have been in the spring of 1847. I have no dates or records of the work done on this frame, or of these experiments; yet have the fullest belief that those experiments were made after making A 1, and before the pictures in a cloud.

Int. 22. State what reasons you had for not making application for a patent earlier than you did.

(Objected to as before, and that is immaterial and illegal.)

A. I had not perfected the mechanical parts to my satisfaction, so as to carry out my idea readily. The California excitement came on, and I wanted rest from eight or nine years' constant study and occupation; considered that a favorable opportunity, and made my arrangements, and left partly for the sake of rest. That occupied about two years, and on my return, the first year, my health was impaired, and I took up the subject of the stereoscope very soon after; and was engaged in considering new ideas, new plans, and new inventions relating to the stereoscope and other things connected with our business, studying upon and taking out patents, until I was taken with the varioloid and shut up in my room, when I applied myself to finish this idea of taking pictures rapidly in the centre of the lens by adapting the movement in a frame which would fit any ordinary camera.

Int. 23. Can you produce a frame like that you last referred to as an exhibit in this case?

(Objected to as before.)

A. I will.

(The same is produced and marked as an exhibit in this case—Exhibit C 1, Wing vs. Schoonmaker, W. Warren, jr., examiner.)

Adjourned to May 15, 8½ a. m.

Int. 24. If you have had any means since your examination yesterday of refreshing your memory as to the dates you then spoke of, please state particularly what dates in your book you referred to.

(Objected to as last before.)

76 A. In making search for my book, which is mislaid, I came across, in my own handwriting, the precise dates set down in my book, which I copied therefrom, and I find, as to the months, they were right in my answers yesterday; and I found, also, the day of the month; the year was right. I found also the date of the exhibition of the fair I spoke of, in New York, was in 1842.

Int. 25. Have you found any way of verifying your answer as to when the instrument of which B 1 to B 5 were parts was made? and, if so, state when.

(Objected to as before.)

A. Additional to what I stated yesterday, I find in my own handwriting, copied from my book before me, that I paid Coburn monthly, twice a month, or more, from March, 1847, into the autumn of 1848; that this work, being Stewart's work, makes me more confident that this was made between November, 1846, and March, 1847.

Int. 26. In what respect, if at all, does a camera, to which Exhibit C 1 is applied, differ in its object and purpose from the instrument which you have described, and of which Exhibits B 1 to B 5 are parts?

(Objected to as before, and that is immaterial.)

A. The camera to which C 1 is applied was the common camera in use, without any change in it whatever, of the then size known as the half-plate camera, using its own ground glass; the camera to which B 1 to B 5 was affixed was entirely changed in its front part by the mechanical arrangements necessary to exclude the light and permit the movement of the lens, adding at least one-third to its expense. The object in each was the same—the point aimed at, that of taking pictures in the axis of the focus of the lens, and that axis in a direct line with the object.

Int. 27. How would Exhibit C 1 compare, as to its mode of operation and principle, with Exhibit A 1, if the latter had been completed as you designed it?

(Objected to as before, and that it is leading.)

A. The principle is identical, without the least change.

77 Int. 28. Why did you adopt the form shown in Exhibit C 1?

(Objected to as before to 26th int.)

A. Because with that plate I could furnish every camera that I then knew of with the principle by simply making a frame, or, as I usually call it, a plate-holder.

Int. 29. After you had obtained your patent state what means you took, if any, for introducing the invention to public use, and with what success. What demand did there prove to be for it during the succeeding three or four years?

(Objected to as before, and that it is immaterial.)

A. I had a lot of those frames made immediately; had them placed in the hands of the principal stock-dealer in Boston, as well as keeping them in my own for sale, and offered the frame, complete in its set, at a very low price—I think the sum of five dollars. I used it in my room, furnished samples to some extensive operators, had it on public exhibition at Mr. French's, the stock-dealer's, and do not now remember, and think there were not as many as six sold in six years.

Int. 30. When did there begin to be a demand for your invention, if at all?

(Objected to as before.)

A. I should think about 1860 or 1861, generally; but previous to that, some two or three years, there were a few individuals who, without

right, applied it to their own use; I do not know of one single case of its use in New England, out of our rooms, previous to 1859 or 1860.

Int. 31. State, as far as you know, to what extent it is used at the present time.

(Objected to as before.)

A. As far as I know, by all good operators doing a respectable business, it is, in some of its forms, universally used.

A. Will you explain briefly the mode of using the frame marked Exhibit C 1?

(Objected to as before.)

78 A. The diaphragm is placed in the frame of the size required for the picture; the plate is inserted under the block without exposure, and the cover is shut down upon it; the opening of the cover is then shut under the block; the block stands pressed against one corner of the opening in the plate-holder; the light is admitted to the portion of the plate then opposite the diaphragm; the block is then moved to the opposite corner and a new portion of the plate brought opposite the opening in the diaphragm, which is then exposed; the door of the plate-holder is then opened and the block dropped down and another portion of the plate brought opposite the opening in the diaphragm; after exposure the block is removed to the remaining corner and the picture taken upon that portion of the plate; this, that I have described, is for a plate with four pictures upon it; the accompanying blocks and diaphragms are moved to adapt themselves to the sizes of the plates used, the movement of which may readily be seen by any operator.

Int. 33. What became of the instrument of which B 1, &c., are parts?

(Objected to as before.)

A. After we had made these new frames and others on similar principles the old camera, which had been altered over to suit Exhibits B 1, &c., I think was altered over for other experiments, B 1, &c., being taken off, it was simply a 6½ by 8½ box, as we called them, without B 1, &c., differing any from the common boxes of that size.

Int. 34. Have you searched for the missing portions?

(Objected to as before.)

A. I made search at the time of a former examination before a commissioner in the Richardson case and was not able to find it, believing that it still exists among the rubbish in our attic, or portions of it.

Int. 35. Was there any mode known previous to your invention of taking more than one picture upon a single plate? If so, describe it.

(Objected to as before, and that it asked witness to state abso-

79 lutely of his own knowledge what he cannot by any possibility know.)

A. There was method and manipulations, two or three modes known by myself, and I know that others knew them; I saw their work on exhibition in Broadway, New York. In 1842 or 1843 I made four pictures upon a plate by adjusting the image upon the ground glass, so that by swinging the camera a little to the right and left I could use one quarter of the plate and then the next quarter on the same end, and then by carrying the plate into the dark closet and changing its ends, I could make two more pictures on the other quarters of the plate in the same way. I afterwards constructed several slides so by using two or more together, the slides having portions of them cut off, with one large slide in front covering the whole, that by swinging the camera I could make three pictures side by side and perpendicular upon the plate at three different periods of time, without taking the plate-holder from the cam-

era box. The pictures I saw on exhibition on Broadway, New York, were made in the first-mentioned way with two heads at two opposite ends of the plate. The pictures that I made in 1842 or 1843 is now in my possession, made in the same way.

Int. 36. In using the first mode that you have described, how did you protect the unexposed portions of the plate from the light?

(Objected to as before.)

A. By a slide within a slide, the inner one having a corner cut off of its lower part equal to one-fourth of the plate.

Int. 37. State whether or not the pictures so made were taken in the axis of the lens.

(Objected to as before.)

A. They were not.

Int. 38. Look at Exhibit O, Schoonmaker, now shown you, and state whether you heard the witness, James B. Sinsabaugh, describe the manner in which it was used for taking two pictures on a single plate and whether you understand the manner of its operation.

80 (Objected to as before.)

A. I heard his examination and description of the use of the instrument and clearly understood the manner of its operation.

Int. 39. State, if you please, how Exhibit O, Schoonmaker, compares in principle and operation when used for taking two pictures on a plate with the apparatus used by you in 1842 or 1843 as you have stated.

(Objected to as before.)

A. In the principle it is the same; in its mechanical appliance one-half of the opening in the camera is permanently covered, which answers to one portion of the inner slide in my plate-holder, producing precisely a similar result. In Exhibit O, both pictures are made or might be made on the same side or inclination from the axis of the lens and the center of the object; in my pictures, made in 1842 or 1843, the two pictures were made, one on the right hand of the axis of the lens, the other on the left at the same inclination; each picture being made in corresponding portions of the lens on each side of the axis of the lens, and the pictures being made by Exhibit O would both be made in one and the same portion of the lens in which my pictures are made, without any mechanical variation whatever.

Int. 40. State whether, in your opinion, the camera box and apparatus marked Exhibit O, Schoonmaker, is substantially the same as the camera box and apparatus described in your reissued patent and the frame of which is in evidence and marked Exhibit C 1, and give your reasons for such an opinion.

(Objected to as before.)

A. The camera box marked O, Schoonmaker, in its mechanical arrangements, taken in connection with the principles upon which the picture is made in relation to the axis of the lens and position of the lens to the object, bears no relation whatever either in the principle claimed in the reissued patent or to the mechanical arrangements by which that principle is obtained; the

81 instrument O, Schoonmaker, is a common camera with one-half its chamber closed, the line of enclosure drawn through the centre of the camera and through the axis of the lens, rendering it impossible, it being fixed, to make a picture of any object whatever, either large or small, with the line of the axis of the lens in the line of the center of the object and obliging us in using the camera and lens, Exhibit O, as now arranged, to make the center of the object, when the image covers the plate, three-fourths of an inch from

the axis of the lens, thus diminishing the value of the picture on account of the imperfect outer portions of the lens compared with its center, diminishing the light so as to require a much longer time, and when sharpness is desirable requiring a diaphragm over the lens in front, still further diminishing light and thus rendering it on these accounts a very imperfect manner of making pictures, very undesirable on account of the length of time required for the exposure, as well as on account of the distortion of the image which must necessarily happen under such circumstances in all lenses used for making photographic likenesses, thus rendering this instrument and all like it unfit for the use of any intelligent photograper, and as such it has been discarded not only by all the earlier practitioners but by the novices in the profession; the reissued patent enables the operator to move from point to point upon the plate, exposing the different portions of it, after the first mechanical adjustment of the ground glass in the frame, so rapidly that an adept in the business may move his plate from point to point without covering the aperture in the camera, occupying so short a space of time in the changes that no action of the light is discernable in the passage of the plate from point to point, thus producing from two pictures to a gross or more, according to the mechanical arrangement of the camera and the number of lenses, each equally perfect and without distortion, as nearly so as the laws of philosophy and optics will permit.

Int. 41. Could the principle of Exhibit O, Schoonmaker, be practically applied to a camera containing a number of lenses?

82 (Objected to as before and that it is immaterial.)

A. It could not be used with a number of lenses without great mechanical changes in its construction. It could not be used at all with a number of lenses.

Int. 42. What is the axis of a lens?

(Objected to as before.)

A. A line drawn through its center perpendicular to its plane.

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 1. You state that in the use of your instrument in taking pictures in 1842 and 1843, that you took one on the right side of the axis of the lens and one on the other side; in so doing did you not withdraw the plate-holder from the camera box after taking the first impression, and then introduce the focus glass and refocus for the other picture on the other side of the axis of the lens?

A. I did not withdraw the plate-holder from the instrument but drew out a false slide from the inside of the main slide and turned it over, a portion having been cut from the false side so as to expose a portion, one-quarter of the plate; drawing this false slide and turning it over and inserting it again would expose the opposite quarter of the plate on the same end; then, by a slight swing of the camera to correspond, I brought the image into that portion of the plate I desired without refocusing, having previously estimated and measured the distance necessary to swing the camera.

Cross. 2. Then you did not slide the plate-holder at all in front of the field of the lens in the process described in your last answer?

A. The plate-holder was carried with the camera in the field of the lens without sliding it at all, by the movement of the camera.

Cross. 3. Then in the last-named process you only moved the whole camera box to take each picture?

83 A. I moved first the inner side by turning it over, as that had

its lower portion cut off; I thus accomplished taking two pictures on the lower half of the plate by the movement of the camera, holding the frame in its place, which, consequently, moved with it; and after taking those two pictures on the lower half of the plate, I took out my holder out of the camera, took it into the dark closet, reversed the ends of the plate, took it back and went through the same process as before.

Cross. 4. Did the plate-holder in the camera box, Exhibit O, Schoonmaker, in making two pictures on one plate, slide into or over the field of the lens?

A. It slid over only one-half of the field of the lens, and that over only one-half section of the lens.

Cross. 5. Do you know, of your own knowledge, anything more of how the pictures you saw in New York were made, to which you have referred in your direct examination, than what you saw of them as they were on exhibition, as you have stated?

A. I do not.

Cross. 6. How do you swear then, in your direct examination, that they were made by the same process you used, as stated in said examination?

A. The heads of the pictures were on the opposite ends of the plate; the picture was a likeness from life; the idea of changing the ends of the plate after making them on one end, was a common one; I know this from instructions given to pupils generally who were practicing, and in that sort of way that we became familiar with what is going on in the profession by communicating with others, (and by their statements, which warrants me in the belief that my plans for making those changes in principle were similar.)

(Counsel for respondent objects to portion in parentheses, and also to have it struck out as not responsive to the question.)

Cross. 7. Are the pictures, made with Exhibit O, Schoonmaker, on opposite ends of the plate facing each way, and like, in their situ-
84 ation on the plate, those made by you in 1842 and 1843, with the instrument you then used?

A. The pictures made with Exhibit O, Schoonmaker, as at present arranged, are two pictures side by side on the plate, and it is adapted to but two pictures; they are on opposite sides of the plate, each picture occupying one-half of the plate, and can be faced at pleasure; the picture is made, each picture occupying one-half of the plate side by side on the plate, each picture appearing similar and viewed without any change in the position of the plate; the picture made in Exhibit O, occupies one-half of the plate, while mine occupies only one-quarter, and standing in relation to each of the two parts these pictures, headed the same way, are viewed the same way as those would be viewed in Exhibit O.

Cross. 8. In one of your answers on cross-examination herein, you speak of the pictures you saw in New York on exhibition, and say they were likenesses from life; do you think that at that time said pictures were good pictures?

A. I have no reason to suppose but what the passer-by would generally pronounce them, at that time, good pictures in the sense that the public generally understand good pictures.

Cross. 9. In your first patent, marked Exhibit A, Wing, herein, does your patent claim the moving the lens over the plate? I ask a specific answer in the terms of my question.

A. I think it covers it from the fact that I say my invention consists in bringing successively the plate into the centre of the camera.

Cross. 10. Do you find the language in said patent, or in the claim or specification attached thereto, exactly as you have stated in your last answer?

A. I stated it in substance, and will read it exactly: "My invention consists in a peculiarly arranged frame in which the plate-holder is permitted to slide, *by which means* I am enabled to take four daguerreotypes upon one plate and at one sitting, different portions of the plate
85 being brought successively opposite an opening in the frame, the opening remaining stationary in the axis of the camera while the plate-holder and plate are moved;" I ask to have the words "by which means" underscored, because I consider these movements, and any similar movements or any movements whatever for any similar purpose, as embracing the whole ground of the claim of taking pictures in the axis of the focus of the lens, and therefore that my first answer in connection was correct.

(The words in the above extract, "by which means," underscored, are not so underscored in the original claim, but so marked here at the request of witness.)

(Counsel for respondent objects to the entry upon the minutes of all and every part of what the witness has stated on his own account, and also of the commissioner's minutes, from and including the words, "I ask," and including the words "the witness;" and he asks to have it struck out as not belonging to his cross-examination, and as being volunteer statements of the witness, and as his argument of the case, in part, which belongs properly before the court on final argument.)

Cross. 11. Do you consider that any plate-holder, which slides into the field of the lens in making a succession of pictures more than one on a plate, is an infringement of your patent referred to in your testimony herein? Answer in the terms of the question only.

A. Insert the words "the axis" after the words "into the field of," and I answer yes.

Cross. 12. Will you now answer the last question put you by me without any change of the question on your part, and in the terms of said question?

A. Understanding the field of a lens to be in the axis of a lens, in its central and best part, I answer I do, not admitting a portion or section of the lens outside of the centre or axis to be in the field of the lens properly speaking.

Cross. 13. If a portion of the field of the lens is uncovered, but enough is uncovered to let light pass on to enough of the plate to make a good picture, do you consider that portion of said plate on which said
86 picture is made, to be in the field of the lens? Answer in the terms of the question.

A. I will, in the first place, define what I mean by the field of the lens; I do not consider that a good picture can be made by leaving out the central portion of the field by drawing a line on an inclination of the axis of the lens from the center of the object, through the lens, to the center of the image, the lens standing askew, or with its axis away from the object to be taken; the image is not in the best field, from the fact that the object is not on a line with the axis of the lens; the object, with the lens thus placed, is on the outside of the field of the lens, not in its best portion, but in its imperfect portion, and it is therefore necessary to reduce the aperture of the lens so as to give it definition, and it likewise has a different focus from the center, or axis of the lens, and this must be borne in view by the operator, and a change made according to these circumstances.

(Defendant's counsel insists that the last answer is in no way responsive to the question, and asks to have it stricken out.)

Cross. 14. If a portion of the field of the lens is uncovered, but enough is uncovered to let light pass on to enough of the plate to make a picture, do you consider that portion of said plate, on which said picture is made, to be in the field of the lens? Answer in terms of the question.

A. There is a sense in which any light passing from all objects in front of the lens, through the lens, and coming to its focus perfectly and imperfectly, a portion of it near the lens, and a portion of it distant, may be said to be in the field of the lens; but that is not the sense in which I understand it proper to use the term field of the lens; I think more properly it might be called the field of view. Taking now different portions of that lens, images will be formed of the objects in front of the lens, behind it, but not on a plane; the perfection of those images, or their goodness, will depend upon whether they come from objects directly in front, and the images are formed directly in the focus of
87 the lens behind it, and those images that are perfect, I pronounce to be in the field of the lens, as I understand it. Such a picture as is inquired about would be in the field of view, and in the field of a portion of the lens.

Cross. 15. You say that a picture, taken not in front or centre of the axis of the lens, is imperfect; if so, how do photographers make pictures of very high buildings, or very long ones, and keep and preserve the architectural lines, and other beauties of the object, clear to the extremes of the plate, in every perfection?

A. The artist selects an instrument with the longest focus which can be used, consistent with the time required to expose the plate; he diminishes the aperture of the lens, by a diaphragm, to the smallest size practicable, considering the time in which he can expose the plate; to preserve architecture, he swings out the bottom of his ground glass when standing on a level with the base of architecture, so, as by a mechanical contrivance, to enlarge those portions of the image which are diminished by distance, according to the laws of perspective; and with all of the care of which the operation is susceptible, he has only that portion of the picture perfect which may be said to be made by reflected parallel rays, and no instrument has equal perfection in every portion, from its axis to its outer edge; and no picture, made with a whole lens, has equal perfection from its centre, or the line of its axis, to its outer edge, but only approximates absolute accuracy and perfection; if the lens has so long a focus, and the position can be so far distant that the light from the architecture, or very long building, so that the light reflected from the building will fall upon the lens in lines almost parallel, or so nearly so as to be called, in the common acceptation of the term, parallel rays, the picture may be excellent, and the degree of perfection great, but all of the ordinary work of that description, usually shown and usually made, shows the outside of the picture to have its lines curved somewhat in the form of the stave of a barrel, from the very fact that the extremities of the object form a focus in the
88 image, is in a different place from the centre of the view.

Int. 16. If you find it necessary to swing out the bottom of the focus glass to preserve the lines of a very high building, how do you obviate this difficulty with a very long building?

A. Standing in front of a long building, to photograph it, with the camera elevated to a proper height, a short distance above the base, the perspective of the architecture, in its horizontal lines, will be as perfect as the instrument is susceptible of making, diminishing in their height

from the horizon to the right and left properly, or as nearly so as can be expressed; the eye, in architecture and looking up, sees the same perspective, so that two columns, rising sufficiently high, at the extremities of the longest building, would appear to meet, so that the instrument, to open those lines, and continue them perpendicular, instead of appearing to be a slant, must be so constructed that the image or images of the top of the building may be spread out at equal distances, or as nearly so as possible, as the other extremities of the perpendicular lines have at the base; the farther the lower end of the ground glass swings out from the lens, the wider will be the separation of those lines at the top, and care must be taken, by the nicest measurements, to preserve the perpendicular lines in the picture equally distant throughout their length, or at least as near as may possibly be.

Cross. 17. In taking a picture of a large building, are the top and bottom of it, and the sides of it, as equally in the front or centre of the field of the lens as the centre of the building to be taken, and, if not, are not said extremities at one side of the centre or front of the field of the lens? Answer briefly in the terms of the question.

A. In taking a large building only a small portion of the centre of the lens is used at all, so that the rays that pass through this very small, reduced portion are nearly parallel from the centre and the extremities, and may be nearly in the same focus; the extremities of the view are, of course, not in the position of its centre.

89 Cross. 18. You say, in your direct examination, you went to California, and that you went in part to get rest, &c. State what business you were engaged in, and what your occupation was while in California.

A. I spent my time there in the open air at what is called the mines, in the vicinity of Mormon Islands, in daily exercise and labor, digging for gold, and its attendant efforts.

Cross. 19. How long was you sick with the varioloid after your return from California, and when was it?

A. I think it was three years after my return, and I was sick in November, the fall of 1854; shut up in my room for a little over two weeks; I am not sure as to the time.

Cross. 20. Did you not go to Troy, in the State of New York, and attend upon the examination of James B. Sinsibaugh, one of the defendant's witnesses then examined in this suit, and examined on the part of the defendant?

A. I did; I did not know who was to be examined.

Cross. 11. On that examination, did you not attend and take minutes of the testimony, or some part of it?

A. I did.

Cross. 22. Did you not then and there examine the depositions and exhibits of other of the defendant's witnesses herein, or some part of those depositions and exhibits?

A. I saw the depositions, or some depositions, and hurriedly glanced over a small portion of them without giving them much of any examination; I saw some exhibits, and was told of others I did not see; I found Mr. Cowen so late that I had no time to make any examination very particularly, not so much as I wished, and he was unable to find the exhibits after the close of the examination.

Cross. 23. Did you not then and there talk with and counsel with Mr. Cowen, the plaintiff's counsel, about this case, who had then charge of the examination for the plaintiff?

90 A. I talked with him all I had opportunity, not seeing him

until after the appointment, and after the gentlemen had come into the room to make the examination; as for counseling I was glad to find him so well posted and so intelligent in the matter, and came away satisfied he needed no counsel from me.

Cross. 24. Look at Exhibit O, Schoonmaker, and measure the opening which cuts off portions of the light from the lens, and state if the exact centre of the axis of the lens is left or shut out.

(Objected to as immaterial, inasmuch as Exhibit O is manufactured for the purpose of being introduced as evidence in this suit.)

A. It's impossible for me, without instruments and experiments, to tell whether that is exactly in the centre or not, but the centre of the opening is about three-fourths of an inch one side of the centre of the lens; the evident design of the whole thing is to have it in the middle.

Cross. 25. How can you state the design, or how do you get the evidence of the design of the makers of O. Schoonmaker, in reference to what you have stated about it, except from the instrument itself?

A. I get it from the instrument itself; I might have had it from Mr. Sinsibaugh's testimony, but I have forgotten it.

Cross. 26. When you were at Troy attending upon Sinsibaugh's examination, or at any time, did you see two pictures, sworn by Sinsibaugh to have been made by him, two on a plate, which were introduced as exhibits in this cause, and marked by John T. Lamport, the examiner?

A. I did not see them; I asked the commissioner for them on the close of the meeting, and he said the parties had taken them away.

Direct examination resumed.

Re-direct 1. Do you consider that the use of Exhibit O, Schoonmaker, or of an apparatus similar thereto, in taking two pictures on a plate, would be an infringement on your reissued patent?

(Objected to as before.)

91 A. I don't consider that it has any relation whatever, as it now stands, with the frame described as belonging to it, to my patent; I don't consider it an infringement.

Re-direct 2. Will you state what is the meaning of the term field of the lens, as used by you in the specification and claim of your reissued patent?

(Objected to as before, and that it is immaterial, and asking for what is shown in the patent and specification, and that he has answered that question a number of times specifically in answer to the gentleman's question.)

A. Equal portions surrounding the axis of the lens.

Re-direct 3. Need these portions that you speak of be of any definite diameter?

(Objected to as to last above, excepting the three last objections.)

A. They need not be, provided the diameter is only large enough to give a definite and distinct image.

(Plaintiff's counsel here offers in evidence certified copies of bill, answer, replication, and decree of the case of Simon Wing vs. C. F. Richardson.

Defendant's counsel objects to its introduction on the same ground as stated to 5th int. in Coburn's deposition, and also on the ground that it is not properly exemplified, or certified, and sealed; and, thirdly, because it is immaterial and illegal; and, fourthly, that it is not between parties to this suit.

Evidence received and marked Exhibit D 1, Wing vs. Schoonmaker, W. Warren, jr., examiner.)

ALBERT S. SOUTHWORTH.

The deposition of Simon Wing, taken, subscribed, and sworn to May 15, 1868, before me.

WINSLOW WARREN, JR.,
Examiner.

92 *Direct examination by E. Cowen, esq., counsel for complainant.*

Interrogation 1. Please state your name, age, residence, and occupation.

Answer. My name is Simon Wing; age, forty-one; residence, Boston, Mass.; am a photographer.

Int. 2. State whether or not you are the plaintiff in this suit, and the assignee of the patent on which it was brought.

(Defendant's counsel objects to the question and answer to it on the same grounds as stated to 5th int., Coburn's deposition.)

A. I am the plaintiff and assignee of the patent.

Int. Look at the photograph now shown you, and state what it is and describe it.

(Objected to as last above, and that it is immaterial.)

A. It's a photograph of three globes placed on a line; they are of equal size and taken at the same, showing the difference between the center image made from the center globe and the outside images made from the outside globes. The outside globes were placed at equal distances from the center, one and equi-distant from the lens or camera, though farther from the lens than the center globe, thereby showing the effect of the image falling on the ends of the plate crossing the axis of the lens, and showing the difference between images made at those points and the center point; the center globe is directly in front of the lens.

Int. 4. What is the difference in the vertical and horizontal diameter of the center globe?

(Objected to as before.)

A. No particular difference.

Int. 5. What is the difference between the longest and shortest diameter of each of the two outside globes?

(Objected to as before.)

A. Nearly a quarter of an inch difference in each.

Int. 6. Have you had occasion to travel through the country
93 extensively upon business connected with your patent, and to visit a large number of persons in the photographic business?

(Objected to as before.)

A. I have.

Int. 7. Will you state, in general terms, how extensively your patent in this suit is used throughout the country, or the principle of it?

(Objected to as before.)

A. About all of the photographists who do much business have used it, or are using it, and can hardly be induced to dispense with it.

(Plaintiff's counsel here offers in evidence the photograph of the three globes referred to.

Defendant's counsel objects to its introduction in evidence for the same reasons as to the introduction of evidence stated just previous to 5th int., Coburn's deposition.

Evidence received and marked by examiner, Exhibit E 1, Wing vs. Schoonmaker, W. Warren, jr., examiner.)

Cross-examination by R. M. Townsend, esq., counsel for respondent.

Cross. 1. In making pictures of three globes with an instrument that has not enough field to cover all the globes perfectly, could you not distort the two outside ones more or less by moving the instrument closer to the globes or farther off?

A. The way I understand, and my experience has taught me, that the greater the angle the light falls from the two outside globes, the more distorted or oblong they will appear, and that it is impossible to make three globes side by side, the two outside ones being as near perfect as the center.

Cross. 2. How do you account, in making a picture of a long building, for the preservation of the architectural lines in strict conformity to perspective drawing, if you cannot photograph two extremes without such amount of distortion as sworn by you in reference to your picture of the three globes?

94 A. Two flat surfaces copied when the diaphragm is exceedingly small in the lens, or you have no lens at all, will throw light corresponding to the flat surface copied; but taking three globes, or more like a globe on the top of very tall spires of churches falling obliquely on the flat surface, spreads over more of the plate than is required to make one behind the center of the lens; and in order to have that globe appear round, it must be looked at obliquely, or at the same angle that the light passes through the center of the lens, as you will observe by Exhibit E 1.

Cross. 3. In taking a picture of any kind, a person, for instance, cannot you distort the same picture by moving the instrument closer, and enlarging the picture beyond what the field of the lens has power to cover?

A. Perfection in photography, I think, is not often arrived at, in a nice sense of the word, and the farther you go from the middle or behind the middle of the lens, the more imperfect they are, and the larger the image of a person, the more imperfect.

Cross. 4. Is this not more apparent in some instruments than in others?

A. It is.

Cross. 5. Can you not, by having lenses enough made, duplicate pictures faster and with more ease to the subject or sitter, than by making them with one lens, and moving the plate over the lens for each picture?

(Objected to as immaterial.)

A. I made over eleven hundred impressions in less than twenty minutes, by moving my plate over the lens, which could not have been done by a cluster of tubes so perfectly and in so short a time; if I answer this question yes or no, it may be taken wrong both was, and I do not wish to be misunderstood.

Cross. 6. Suppose you wanted to make only a dozen pictures of one sitter, which is the usual number, would it be easier to make them all at once, or with twelve lenses, or sit twelve times and slide the plate a corresponding number of times?

95 A. That would depend upon the size of the pictures; if I were going to make twelve card-size pictures, or larger, I should much prefer, and so would my customer, to make them with one lens, or with less than twelve, than to be obliged to use so large lenses and so large

a plate, and so large a box, and so large apparatus all the way through for preparing plates, by using less lenses and changing position of my customer, and having the advantage in difficult subjects, like small children, of saving a part of my prepared plate for a successful one in case I made a failure of the first or second; I consider the value of the advantage of moving very large in proportion to a cluster of tubes.

(Defendant's counsel objected to answer as not responsive, and asks to have it struck out.)

Cross. 7. Suppose you were going to make what is generally known as gem pictures, would it be easier for the sitter, or as economical in time for the operator, to make twelve with twelve lenses at once, or sit twelve times and make the corresponding moves to the plate-holder over one lens?

(Objected to as immaterial.)

A. It is impossible to make twelve pictures, in some cases, with twelve tubes that are worth anything, for the reason the subject or object you copy must be placed directly in front of the lens, and near to the lens to make a fair or good picture; from life, we scarce ever use a single lens to duplicate very small impressions, but use a cluster of tubes or lenses, and save time, as well as giving the customer a choice of position by moving the plate as many times as we please.

Cross. 8. In taking a picture of a building, state whether the outer edges or portions of the building are as much in front of the centre of the lens of the instrument used as the centre of the side of the building taken is; and, if not, is not each outside portion, at the time of taking the impression or picture, at one side of the centre of the lens? State briefly in the terms of the question.

A. I should say the outer edges were not in front of the centre of the lens, or the plate, or the box.

SIMON WING.

96 *Exhibit A.*—No. 12700.

The United States of America to all to whom these letters-patent shall come:

Whereas Albert S. Southworth, of Boston, Mass., has alleged that he has invented a new and useful plate-holder for cameras, which, he states, has not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said plate-holder, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said plate-holder, and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said Albert S. Southworth, his heirs, administrators, or assigns, for the term of fourteen years from the tenth day of April, one thousand eight hundred and fifty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said plate-holder, a description whereof is given in the words of the said Southworth in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this tenth day of

April, in the year of our Lord one thousand eight hundred and fifty-five, and of the independence of the United States of America the seventy-ninth.

[L. S.] ROBERT McCLELLAND,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

S. T. SHUGERT,
Acting Com'r of Patents.

97 *The schedule referred to in these letters-patent, and making part of the same.*

To all whom it may concern:

Be it known that I, A. S. Southworth, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful plate-holder for cameras for taking photographic impressions, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, in which Fig. 1 is a front view; Fig. 2, a rear view; Fig. 3, a similar view, the cover being dropped into a horizontal position; Fig. 4, a vertical section through the centre; Fig. 5, an end view; Fig. 6. details, which will be referred to hereafter; Fig. 7, the slider.

In taking daguerreotypes of small size for lockets, it often occurs that the first picture taken is not properly timed, or exposed to the light, and a second or a third is required to be taken before a perfect picture is obtained; each picture thus taken requires a freshly prepared plate, which causes a considerable consumption of time.

The object of my invention is to bring in a rapid succession different parts of the same plate, or different plates, of whatsoever material prepared for photographic purposes, into the center of the field of the lens for the purpose of either timing them differently, that the most perfect may be selected, or of taking different views of the same object with the least delay possible, or of taking stereoscopic pictures upon the same or different plates with one camera.

My invention consists in a peculiarly arranged frame, in which the plate-holder is permitted to slide, by which means I am enabled to take four daguerreotypes upon one plate, and at one sitting, differ-
98 ent portions of the plate being brought successively opposite an opening in the frame, the opening remaining stationary in the axis of the camera, while the plate-holder and plate are moved.

The frame, which guides the motion of the plate-holder, is constructed as follows:

A is the front plate, immediately in the rear of which is a zinc plate B; in the centre of this plate is the hole C, (seen in blue in Figure 2,) which is closed by the zinc slider D (Fig. 7) in the customary manner; around the borders of this frame are the strips E, seen in section in Fig. 4, and in dotted lines in Fig. 1. The rear plate F of this frame is hinged to one of the strips E, at *b*; between this plate and the zinc plate B, and within the space enclosed by the strips E, slides the plate-holder, which is constructed as follows: G is the frame of the plate-holder, into the rectangular opening of which is inserted the daguerreotype plate seen in red in Fig. 2 and 4, and in dotted lines in Fig. 1. The back plate H rests against the daguerreotype plate and holds it in place.

The plate-holder, thus constructed, is allowed to take four different positions within its carrying-frame so as to bring the four different portions, 1, 2, 3, and 4, Fig. 2, of the plate successively opposite to the open-

ing C. It is guided in its motions in the following manner: I is a block attached to the back plate of the plate-holder, which projects through a rectangular opening K in the hinged plate E; the block I is moved in succession into the four corners of the opening K, by which means the four different portions of the daguerreotype plate are brought opposite to the opening C; the motions of the block I are regulated by the guide L, hinged to the plate F, and *d*; when this block is in the position seen in Fig. 2, the block I rests upon its top edge, and one corner of the daguerreotype plate (3) is opposite to the hole C, when the block I is slidden to the opposite corner of the opening K, still resting upon the piece L; another portion (4) of the daguerreotype plate is brought opposite the opening C; the guide-piece L is then thrown back, as seen in Fig. 4, and the block I is allowed to drop into the right-hand lower corner of the opening K, the block I, as it descends, being guided by the edge *a*, and the portion (1) of the daguerreotype plate is brought opposite the opening C; by another movement the block L is thrown into the left-hand corner of the opening K, the block I sliding in the channel *c*, when the portion (2) of the daguerreotype plate is exposed to the opening C. I am thus enabled to take four impressions upon different portions of the same plate. These may be miniatures of the same person taken, as before stated, for the purpose of selecting the best for a locket; or they may be different views of the same face taken upon the same plate for the purpose of preserving them together, or they may be daguerreotypes of different persons, as different members of a family; or, lastly, stereoscopic pictures may be thus taken with a suitably arranged camera.

It is evident that as the frame A B remains stationary, the opening C, when once placed in the axis of the camera, will not change, and the successive pictures will all be taken with equal correctness; and the changes are so quickly made that the aperture of the camera need not be covered, from first to last, unless different positions or different objects are taken.

The guide-piece L, or some equivalent thereof, is absolutely essential, as the attempt to hold the block I by hand would shake the camera or move it from its normal position whilst the picture was being taken.

Heretofore I have spoken of the above contrivance as calculated to take four pictures upon the same plate; it is evident, however, that it may be so arranged as to take any desired number, as six or eight, for example, without departing from the principle of my invention.

Claim.

What I claim as my invention, and desire to secure by letters-patent is, the within described plate-holder, in combination with the frame in which it moves, constructed and operating in the manner and for the purpose substantially as herein set forth.

ALBERT S. SOUTHWORTH.

Witnesses:
SAM. COOPER.
JOHN S. CLOW.

Exhibit B.—Reissue No. 1049.

The United States of America to all to whom these letters-patent shall come.

Whereas Albert S. Southworth, of Boston, Massachusetts, has al-

leged that he has invented a new and useful plate-holder for cameras, (for which letters-parent were issued to him, dated April 10th, 1855, which letters having been surrendered by him, the same have been canceled and new letters ordered to issue to him an amended specification,) which he states has not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said plate-holder, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said plate-holder, and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said Albert S. Southworth, his heirs, administrators, or assigns, for the term of fourteen years from the tenth day of April, one thousand eight hundred and fifty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said plate-holder,
101 a description whereof is given in the words of the said Albert S. Southworth, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-fifth day of September, in the year of our Lord one thousand eight hundred and sixty, and of the independence of the United States of America the eighty-fifth.

[L. S.]

JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

PHILIP F. THOMAS,
Com'r of Patents.

The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, Albert S. Southworth, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain improvements in taking photographic impressions, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which Fig. 1 is a front view of the apparatus which I employ in carrying out my invention; Fig. 2 is a rear view; Fig. 3, a similar view, the cover being dropped into a horizontal position; Fig. 4, a vertical section through the centre; Fig. 5, an end view; Fig. 6, details, which will be referred to hereafter; Fig. 7, the slider.

102 In taking daguerreotypes, photographs, &c., it has been customary to use a separate plate for each impression, the plate being removed from the camera and replaced by another, where several impressions of the same object were to be taken, as in multiplying copies, or for the purpose of selecting "the best-timed" pictures; this caused considerable delay and trouble, to obviate which is the object of my present invention, which consists in bringing successively different portions of the same plate, or several smaller plates secured in one plate-holder, into the field of the lens of the camera.

In carrying out my invention I have made use of a peculiarly arranged frame, in which the plate-holder is permitted to slide, and in which the position of the plate-holder is definitely indicated to the operator, so that he can quickly and acurately adjust the plate or plates; the accompanying drawings and description so explaining the same, that others skilled in the art may understand and use my invention.

The frame which guides the motion of the plate-holder is constructed as follows: A is the front plate, immediately in the rear of which is a zinc plate B. In the centre of this plate is the hole C, (seen in blue in Fig. 2,) which is closed by the zinc slider D (Fig. 7) in the customary manner.

Around the borders of this frame are the trips E, seen in section in Figure 4, and in dotted lines in Fig. 1; the rear plate F of this frame is hinged to one of the strips E, at *b*. Between this plate and the zinc plate B, and within the space enclosed by the strips E, slides the plate-holder, which is constructed as follows: G is the frame of the plate-holder, into the rectangular opening of which is inserted the daguerreotype plate seen in red in Figs. 2 and 4, and in dotted lines in Fig. 1; the back plate H rests against the daguerreotype plate and holds it in place; the plate-holder, thus constructed, is allowed to take four different positions within its carrying-frame so as to bring the four different portions, 1, 2, 3, and 4, Fig. 2, of the plate successively opposite
103 to the opening C. It is guided in its motions in the following manner: I is a block attached to the back plate of the plate-holder, which projects through a rectangular opening K in the hinged plate F; the block I is moved in succession into the four corners of the opening K, by which means the four different portions of the daguerreotype plate are brought opposite to the opening C; the motions of the block I are regulated by the guide L, hinged to the plate F, at *d*; when this block is in the position seen in Fig. 2, the block I rests upon its top edge, and one corner of the daguerreotype plate (3) is opposite to the hole C, when the block I is slidden to the opposite corner of the opening K, still resting upon the piece L; another portion (4) of the daguerreotype plate is brought opposite the opening C; the guide-piece L is then thrown back, as seen in Fig. 4, and the block I is allowed to drop into the right-hand lower corner of the opening K, the block I, as it descends, being guided by the edge *a*, and the portion (1) of the daguerreotype plate is brought opposite the opening C.

By another movement the block I is thrown into the left-hand corner of the opening K, the block I sliding in the channel *e*, when the portion (2) of the daguerreotype plate is exposed to the opening C. I am thus enabled to take four impressions upon different portions of the same plate.

There may be miniatures of the same person taken, as before stated, for the purpose of selecting the best for a locket, or they may be different views of the same face taken upon the same plate for the purpose of preserving them together; or they may be daguerreotypes of different persons, as different members of a family; or, lastly, stereoscopic pictures may be thus taken with a suitably arranged camera.

It is evident that as the frame A B remains stationary the opening C, when once placed in the axis of the camera, will not change, and the successive pictures will all be taken with equal correctness; and the changes are so quickly made that the aperture of the camera need
104 not be covered from first to last, unless different positions or different objects are taken.

The guide-piece L, or some equivalent thereof, is absolutely essential, as the attempt to hold the block I by hand would shake the camera, or move it from its normal position whilst the picture was being taken.

Heretofore I have spoken of the above contrivance as calculated to take four pictures upon the same plate; it is evident, however, that it may be so arranged as to take any desired number, as six or eight, for example, without departing from the principle of my invention. In this case, however, I use suitable grooves, stops, or indices, by which the operator adjusts the positions of the plates, substantially on the same principle that he uses the corners of the opening K in the above-described apparatus.

It is evident that my improvement may be embodied by causing the lens of the camera to be made adjustable in different positions with respect to the plate while the plate remains stationary, so that different portions of the plate may be brought into the field of the lens; this I have tried but do not consider it, practically, so good a plan as the foregoing, as it necessitates a change of position of the camera itself, or of the object.

Claim.

What I claim as my invention and desire to secure by letters-patent, is bringing the different portions of a single plate, or several smaller plates, successively into the field of the lens of the camera, substantially in the manner and for the purpose specified.

ALBERT S. SOUTHWORTH.

Witnesses:
A. S. BICKNELL.
J. J. HAWES.

105 *Exhibit C.*

Whereas I, Albert S. Southworth, of Boston, Massachusetts, did obtain letters-patent of the United States of America for a new and useful "plate-holder for cameras," which letters-patent bear date the twenty-fifth day of September, A. D. 1860, for which letters-patent were issued to me, dated April 10th, 1855, which last-named letters-patent having been surrendered by me, the same have been canceled and new letters-patent ordered to issue to me, on an amended specification; and

Whereas Marcus Ormsbee, of said Boston, and Simon Wing, of Waterville, in the State of Maine, are desirous of acquiring my interest therein:

Now, this indenture witnesseth that, for and in consideration of the sum of ten thousand dollars to me in hand paid, the receipt whereof is hereby acknowledged, I have assigned, sold, and set over, and do hereby assign, sell, and set over, unto said Ormsbee and Wing all the right, title, and interest which I have in the invention secured to me by the letters-patent bearing date the twenty-fifth day of September, A. D. 1860, as aforesaid; the same to be held and enjoyed by them, the said Ormsbee and Wing, for their own use and behoof, and for the use and behoof of their legal representatives, to the full end of the term for which said letters-patent are or may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

In testimony whereof I hereto set my hand and affix my seal this

eighth day of December, in the year of our Lord one thousand eight hundred and sixty.

ALBERT S. SOUTHWORTH. [L. S.]

Executed and delivered in presence of—
R. I. BURBANK,
A. J. WRIGHT, Jr.

106 COMMONWEALTH OF MASSACHUSETTS, *Suffolk, ss:*

DECEMBER 8TH, 1860.

There personally appeared the above-named Albert S. Southworth and acknowledged the foregoing instrument to be his free act and deed.

Before me, R. I. BURBANK,
Justice of the Peace.

Received and recorded December 14, 1860.

Exhibit D[1].

Circuit court of the United States, district of Massachusetts, in equity.

To the honorable the judges of the circuit court of the United States for the district of Massachusetts:

Simon Wing, of Somerville, in the Commonwealth of Massachusetts, and a citizen of said State, brings this his bill of complaint against Charles F. Richardson, of North Bridgewater, in the State and district aforesaid, and a citizen of said State.

And thereupon your orator complains and says that he is informed and believes that one Albert S. Southworth was and is the original and first inventor of a new and useful improvement, in photographic cameras, fully described in the letters-patent hereinafter mentioned, the same being a new and useful improvement, which was not known or used before his said invention, and was not, at the time of his application for a patent as hereinafter mentioned, in public use or on sale with his consent or allowance; and the said Southworth being so as aforesaid
107 the inventor thereof, and being then a citizen of the United States, on the tenth day of April, A. D. 1855, upon due application therefor, did obtain certain letters-patent therefor, under the seal of the Patent Office of the United States, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, bearing date the day and year aforesaid, whereby there was secured to him, his heirs, administrators, and assigns, for the term of fourteen years from and after the date of said letters-patent, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; and by virtue thereof the said Southworth became and was the sole owner of all the rights and privileges granted and secured, or intended to be granted and secured, in and by said letters-patent.

And your orator further says that the said Albert S. Southworth exercised and enjoyed the right secured to him by said letters-patent from the tenth day of April, A. D. 1855, to the thirty-first day of May, A. D. 1860, on which last-mentioned day the said Albert S. Southworth, by his deed of that date, duly executed, and recorded, and here in court to be produced, (if required,) for a valuable consideration, conveyed all his right and claim in said letters-patent to Marcus Ormsbee and the said Simon Wing, whereby the said Ormsbee and Wing, as assignees of

said Southworth, were possessed of the sole right and power in them and their assigns, to make, use, and vend to others to be used, the said improvement.

And further, that the said Simon Wing, on said thirty-first day of May, A. D. 1860, by his deed of that date, duly executed and recorded, for a valuable consideration, conveyed to said Marcus Ormsbee all his right and claim in said letters-patent, for, in, and to, among other places, the State of Massachusetts, as by the said deed, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And afterwards the said Albert S. Southworth, at the request
108 of said Ormsbee and Wing, and for the benefit of himself and all persons to whom he had previously conveyed any interest in said letters-patent, surrendered said letters-patent on account of their being inoperative and invalid by reason of a defective or insufficient description and specification, and by reason of his claiming in his specifications, as his own invention, more than he had a right to claim as new; and that the error arose by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention; and thereupon such proceedings were had that, on the twenty-fifth day of September, A. D. 1860, the Commissioner of Patents duly granted and issued to said Albert S. Southworth new letters-patent under the seal of the Patent Office, signed by the Secretary of the Interior and countersigned by the Commissioner of Patents of the United States, for said invention, with an amended specification thereunto annexed, signed by said Southworth, as will appear by said reissued letters-patent here in court to be produced, if required.

And further, that the said Southworth, on the eighth day of December, A. D. 1860, by his deed of that date, duly executed and recorded, for a valuable consideration, conveyed to said Simon Wing and Marcus Ormsbee all his right and claim in said letters-patent, and confirmed to them their title thereto, as by the said deed, here in court to be produced, if required, will more fully appear. And further, that the said Simon Wing, on said eighth day of December, A. D. 1860, by his deed of that date duly executed and recorded, for a valuable consideration, conveyed to said Marcus Ormsbee all his right and claim in said reissued letters-patent, for, to, and in, among other places, the State of Massachusetts, as by the said deed, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And your orator further says that the said Marcus Ormsbee exercised and enjoyed the right secured to him by said reissued letters-patent from the eighth day of December, A. D. 1860, to the seventeenth day of December, A. D. 1863, on which last-mentioned day, the said
109 Marcus Ormsbee, by his deed of that date, duly executed and recorded and here in court to be produced, for a valuable consideration, conveyed all his right and claim in said letters-patent to your orator, in, for, and to the town of North Bridgewater, in said State of Massachusetts, whereby your orator, as assignee of Marcus Ormsbee, was possessed of the sole right and power in him and his assigns, to make, use, and vend to others to be used, the said new and useful improvement in said town of North Bridgewater; and that your orator, by virtue of the premises and said assignments, is the sole and exclusive owner of said letters-patent and all the rights and privileges granted and secured, or intended to be granted or secured thereby, in said town of North Bridgewater.

And your orator further shows that after his purchase of the aforesaid interest in said reissued letters-patent he expended large sums of money in manufacturing cameras with the said improvement, and making the same profitable to himself and useful to the public; that said improvement has been and is of great advantage; that a large number of cameras, made according to said invention, have been sold by him; that the public has, to a great extent and almost universally acknowledged and acquiesced in the rights of your orator; and he will realize and receive large gains and profits therefrom, if infringements by said defendant and his confederates shall be prevented.

And your orator further shows that he has made additions to the improvements in said cameras, and has made arrangements for the manufacture of cameras made according to said invention to supply the market therewith, as fully as there may be a demand therefor, and hoped to do a profitable business in such manufacture and sale, in the belief that he would be protected in the exclusive enjoyment of said rights in the territory of which he has purchased the exclusive right conferred and secured by said reissued letters-patent.

And your orator further shows that he has sold over one hundred territorial rights to use said improved camera, since the assignment to him of said reissued letters-patent, the assignees acknowledging
110 and acquiescing in his claim to the exclusive right to said reissued letters-patent, and to the benefit and advantage of the same to the public.

And your orator furter shows that having acquired the interest in said reissued letters-patent as aforesaid in and for the State of Maine, said reissued letters-patent were infringed in Biddeford, in the district of Maine, by one Enoch H. McKenney, by the use of a camera embracing in its construction and mode of operation the said improvement; whereupon your orator, on the fifth day of April, A. D. 1861, commenced an action at law against said McKenney, in the circuit court of the United States for the district of Maine, and duly entered the same at the term thereof held on the twenty-third day of April, of that year; and thereupon such proceedings were had that he recovered judgment against said McKenney for damages, as by the record in said court still remaining, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And your orator further shows that after he acquired the exclusive right as aforesaid for the district of Maine, said reissued letters-patent were infringed at Augusta, in said State, by one Orrin P. Howe, by the use of a camera made according to said invention; whereupon your orator commenced an action at law against the said Howe, in the circuit court of the United States for said district, for said infringement; and the said Howe, yielding to the rights of your orator, settled the claim, and promised and agreed to be guilty of no more infringements of said reissued letters-patent.

And your orator further shows that he sold and assigned to one Charles L. Marston all his right in said reissued letters-patent for the city of Bangor, in the district of Maine, and thereafter said reissued letters-patent were infringed by one Sawyer; whereupon the said Marston commenced an action at law against said Sawyer, in the circuit court of the United States for the district of Maine; and thereupon, as
111 your orator is informed and believes, said Sawyer yielded to the claim of said Marston under said reissued letters-patent, and settled said action by paying all the costs and expenses, and by promising and agreeing not to infringe said reissued letters-patent any further, and

by giving up to said Marston the cameras he, the said Sawyer, had used in infringing said reissued letters-patent.

And your orator further shows that after he acquired the exclusive interest in said reissued letters-patent for the State and district of Maine, he conveyed to one Charles S. Sanderson all his right, title, and interest in and to said reissued letters-patent in and for the city of Bath in said district, and thereafterwards they were infringed by one William B. Stearns, by the use, in said Bath, of a camera embracing in its construction and mode of operation said new and useful improvement; whereupon the said Sanderson commenced, on the twenty-third day of September, A. D. 1861, an action at law against said Stearns, in the circuit court of the United States for the district of Maine, and entered said action at the term of said court held on the twenty-third day of April, A. D. 1862, and the said Stearns appeared by his counsel, and thereupon such proceedings were had that the said Sanderson recovered judgment against the said Stearns for damages caused by said infringement of said reissued letters-patent and for his costs, as by the record in said court remaining, or a duly authenticated copy thereof, here in court to be produced, if required, will more fully appear.

And your orator further shows that after he acquired the interest in said reissued letters-patent for the State of Maine, as above alleged, he sold to one John S. Variell all his right, title, and interest in and to said reissued letters-patent in and for the city of Gardiner, in said State, and thereafterwards the said reissued letters-patent were infringed at Gardiner aforesaid by one Silas C. Stinson, by the use of a camera embracing in its construction and mode of operation the new and useful improvement aforesaid described in said reissued letters-patent;
112 that thereupon, as he is informed and believes, the said Variell commenced an action at law against the said Stinson on account of said infringement, and the said Stinson thereupon submitted to the claim of said Variell and settled the same, and promised and agreed to use no cameras embracing in their construction and mode of operation the new and useful improvement described in said reissued letters-patent.

And your orator says that various persons have sometimes pretended that your orator's claims under said letters-patent are not valid in law, and threatened to resist them in any proceedings at law which your orator might commence; and yet your orator has found no one who, when proceedings had been commenced, would undertake to test the validity of said letters-patent in a court of law.

Yet the said defendant, well knowing the premises and the rights secured to your orator as aforesaid, but contriving to injure your orator, and to deprive him of the benefits and advantages which might and otherwise would accrue unto him from said invention, did, in said town of North Bridgewater, on the eighteenth day of December, A. D. 1863, and divers other days since, as your orator is informed and believes, without the license or consent of your orator, and in violation of his rights and in infringement of said reissued letters-patent, unlawfully and wrongfully make, sell, and use cameras embracing in their construction and mode of operation the said improvement, the exclusive right to which, in said town of North Bridgewater, is vested in your orator by said reissued letters-patent and said assignments thereof; and that the defendant is threatening to make, use, and sell such cameras, to the effect of depriving your orator of sales for cameras manufactured by him according to said improvement, and of the use thereof.

And your orator further shows that the said cameras which said de-

fendant is making and using embrace in their construction and mode of operation the said improvement substantially the same as that
113 embraced in the cameras sold as aforesaid by your orator, and substantially the same as those used by the defendants in the suits hereinbefore mentioned; and also substantially the same as were used by the numerous parties who have settled for and paid your orator for past infringements of said patent, and acknowledged the validity thereof, and the rights of your orator under the same.

And your orator further shows that the aforesaid acts of defendant are to the great loss of your orator, by which he has been and still is deprived of great profits, which he might and otherwise would have obtained, but which have been and are received by said defendant by and through his aforesaid unlawful acts; and your orator prays a discovery of how many and what cameras the defendant has used or sold and of the profits arising to him therefrom.

And your orator further shows that he has caused notice to be given to said defendant of said infringement and of the rights of your orator in the premises, and requested him to desist and refrain therefrom; but he has disregarded said notice, and refused to desist from said infringement, and still continues to make and use said cameras, as aforesaid, in disregard of your orator's rights under said reissued leaters-patent.

And forasmuch as your orator is utterly remediless at the common law, and can have no relief except in this court; to the end, therefore, that the said defendant may, if he can, show why your orator should not have the relief hereby prayed, and may upon his corporal oath, and according to his best and utmost knowledge, remembrance, information, and belief, full, true, direct, and perfect answers make to the premises, and to all the several matters hereinbefore stated and charged, as fully and particularly as if interrogated as to each and every of said matters, and may be compelled to account for and pay to your orator the profits by him acquired and the damages suffered by your orator from the aforesaid unlawful acts, may it please your honors to grant unto your
114 orator the writ of injunction issuing out of and under the seal of this honorable court in due form of law, commanding, enjoining, and restraining the said defendant and his servants, agents, attorneys, and workmen, and each and every of them, from directly or indirectly making, using, or vending to others to be used, or in any manner counterfeiting or imitating, the said invention, or any part thereof, or any cameras made in accordance therewith; and to grant to your orator such other and further relief as shall be agreeable to equity, and as to this honorable court shall seem fit.

And also may it please your honors to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court, directed to the said defendant, commanding him by a certain day and under a certain penalty to be and appear in this honorable court, then and there to answer the premises and to stand to and abide such order and decree as may be made against him.

And your orator will ever pray, &c.

SIMON WING.

UNITED STATES OF AMERICA,
District of Massachusetts, Suffolk County, ss:

On this fifteenth day of February, A. D. 1864, personally appeared Simon Wing, the complainant above named, and made oath that he has read and heard read the foregoing bill of complaint subscribed by him, and knows the contents thereof, and that the same is true of his

knowledge, except as to the matters therein stated on information and belief, and as to these matters he believes it to be true.

Before me, R. I. BURBANK,
Justice of the Peace.

JOSIAH H. DRUMMOND,
Solicitor for said Complainant.

115 *Exhibit D¹.—Answer.*

United States circuit court, district of Massachusetts.—Vacation, 1864.

SIMON WING
vs.
CHARLES F. RICHARDSON. } In equity.

The answer of Charles F. Richardson, defendant, to the bill of complaint of Simon Wing, complainant.

This defendant, reserving all right of exception to the manifold errors and insufficiencies of the bill of complaint, for answer thereto, or to so much thereof as he is advised is material to be answered unto, saith:

He admits, upon information and belief, the grant of original letters-patent to Albert S. Southworth, as alleged in said bill; but he denies that said Southworth was the original and first inventor of the improvement claimed as new in said original patent, and avers that the said improvement was, at the time of said Southworth's application for patent, in public use, and on sale with said Southworth's consent and allowance, and had been so for more than two years prior to said application; wherefore he submits that said patent, and every reissue thereof, are void.

He denies, upon information and belief, that the said Southworth ever exercised and enjoyed the exclusive right secured to him by said original letters-patent at any time.

He is not informed, except by said bill, what, if any, assignments either of said original or reissued patents were made, and leaves the complainant, therefore, to his proof thereof.

He admits, upon information and belief, the grant of said reissue patent, but he denies that the said Southworth is the original and first inventor of the improvement claimed therein; and he avers that
116 said reissue is not for the same invention which said original patent was intended to secure; and that said original patent was perfectly operative and valid to secure to said Southworth the exclusive right to all which, at the time of taking it, he intended to secure or believe to be his invention, and all which really was his invention; but that said reissue was taken unconscientiously, and against the policy of the law, to prevent this defendant and others from enjoying the benefits of improvements made after said original patent and before said reissue and secured by letters-patent.

He denies that any one ever exercised or enjoyed the exclusive rights secured by said reissued letters-patent at any time.

He is not informed what sums of money may have been expended by said complainant, or how many cameras he has made and sold; and while he admits that the thing described and claimed in said original patent is of considerable advantage to artists, and is largely used, he denies that the public have, to a great extent, or to any extent, acquiesced in the exclusive rights pretended to be secured by said original or reissue letters-patent to the complainant, or to any other per-

sons, or that any exclusive right to the thing so described and claimed belongs to the complainant, or any one else.

He admits, upon information and belief, that some few shop-rights to photographers to use a box or boxes have been sold by the complainant; but he avers that such rights were sold at a cheap rate and without guaranty from the complainant, and only to small operatives in country towns who were pecuniarily unable to incur the expense of defending a suit; and he is informed and believes, and so avers, that not a single manufacturer of cameras containing the improvement described in said reissued patent has ever, in any way, recognized the rights of the complainant, or of any other persons, under either said original or reissued patents; but, on the contrary, that all such manufacturers
117 have always entirely disregarded and defied the same; and that the complainant and others having exclusive interests in said patent, original and reissued, have submitted to, and acquiesced in, said infringement.

He admits that suits have been brought or claims made for damages for alleged infringement of said patent against various photographers in Maine, as alleged in the bill, but he denies, upon information and belief, that the result of such suits or claims are truly stated therein, either in form or substance.

This defendant is not informed, except by the complainant's bill, what records there may be of such suits, or of any of them, and leaves the complainant to his proofs of each and all of them.

He avers, upon information and belief, that many persons have resisted the complainant's pretended claims under said reissued letters-patent, upon the ground that they were utterly invalid in law, and expressed to the complainant a willingness to contest their validity, but that the complainant, well knowing that such claims were utterly unfounded and untenable, has invariably refused to commence such suit or to carry it to a trial when commenced, and submitted to this disregarded and defiance of his pretended claims, except only where he was enabled to make it for the interest of the parties sued to be defeated in such suit, in order that he might use such collusive judgments as an establishing at law of his pretended claims.

And he further says that the camera, or box, which he is herein sued for using, was made, as he is informed and believes, under the protection of, and in accordance with, letters-patent of the United States, granted to William Southworth the 17th day of June, 1862.

He denies, upon his own knowledge and belief, any and all infringement or intention of infringement of the complainant's said reissued patent; and he denies that he is now making or selling, or has ever made or sold, any camera or box whatever, or is using or has ever used, or intends hereafter to use, any camera or cameras, or box or boxes, either substantially the same as that described in said reissued
118 patent, or substantially like those used by the defendants in the suits hereinbefore mentioned and prosecuted therein; and he avers that the only camera he has ever used is practically and substantially identical with that used heretofore by other parties with the knowledge of, and without objection from, complainant, and those having exclusive interests in said reissued patents; and he denies that he has ever used said reissued patent right or has derived any profits from the violation thereof, as charged in the said bill.

And this defendant, further answering, says that the devices described and claimed, and devices substantially the same in principle and mode of operation as those described and claimed, in said reissued

patents, were, prior to said Southworth's invention thereof, known to and used by John Stock, Joseph Mayer, Alexander Becker, and John Bossardet, all in the city, county, and State of New York, now residing in said city of New York; Victor Piard, in Philadelphia, Pennsylvania, and said city of New York, now residing in Jersey City, New Jersey; Nicholas Pike, in said cities of New York and Philadelphia, and also in Brooklyn, in said State of New York, now residing in said Brooklyn; M. A. Root, in said cities of New York and Philadelphia, now residing in said Philadelphia; John Quail, in said Philadelphia, whose residence is in said Philadelphia; ——— Langerheim, in New York and Philadelphia aforesaid, and now residing in said Philadelphia; ——— Haas, in New York and Philadelphia aforesaid, whose residence is in said New York; and ——— Siebert, in New York, now residing in ———, in the State of Tennessee.

And this defendant, further answering, insists that the complainant's said reissued patent is void as a fraudulent abuse of the provisions of law for the amendment of a defective patent; and that the complainant is not entitled to an injunction, or to an account, or costs, or any other relief against this defendant so prayed for in his bill of complaint.

119 And he submits that the material questions of fact arising upon this answer, and the bill of complaint, are properly to be tried and determined in the first instance at law with the aid of a jury, and prays the court that it may be ordered to be so done upon suitable issues to be framed for that purpose.

Without this, that there is any other cause, matter, or thing in the complainant's said bill of complaint material or necessary for this defendant to make answer unto, and not herein or hereby sufficiently answered, confessed, and avoided, traversed or denied, is true to the knowledge or belief of this defendant; all which matters and things this respondent is ready to aver, maintain, and prove, as this honorable court shall direct, and prays to be hence dismissed with his reasonable costs and charges in this behalf most wrongfully sustained.

CHARLES F. RICHARDSON.

MASSACHUSETTS DISTRICT, *Plymouth County, ss:*

On this eighth day of June, 1864, personally appeared the above-named Charles F. Richardson, who, being by me duly sworn, did depose and say that the contents of the above answer, by him subscribed, are true of his own knowledge, except as to the matters therein stated on information and belief, and as to these matters that he believes them to be true.

Before me, a notary public, duly qualified, in and for said county of Plymouth.

Witness my hand and seal the day and year last above written.

[L. S.] J. R. PERKINS,
Notary Public.

120 *Exhibit D[1].—Replication.*

Circuit court of the United States, Massachusetts district.

SIMON WING
vs.
CHA'S F. RICHARDSON. } In equity.

The replication of Simon Wing, complainant, to the answer of Cha's F Richardson to the bill of complaint of the above complainant.

The said Wing, reserving to himself all manner of exception to the

insufficiencies of said answer, for replication thereto, says that he will aver and prove his said bill to be true and sufficient in law to be answered unto, and that the answer of the defendant is uncertain, untrue, and insufficient to be replied to; without this, that any other matter or thing in the said answer contained, material to be replied to or denied, is true. All which the said complainant is ready to prove as this honorable court shall direct, and humbly prays as in his said bill.

By his solicitors,

SMITH & BATES.

UNITED STATES OF AMERICA, *Massachusetts District:*

I, John G. Stetson, clerk of the circuit court of the United States for the first circuit, Massachusetts district, do hereby certify that the foregoing are true copies of the bill, answer, and replication in the cause of Simon Wing, in equity, vs. Charles F. Richardson, in said court.

In testimony whereof I have hereunto set my hand and the seal of said circuit court this fifteenth day of May, A. D. 1868.

[L. S.] JOHN G. STETSON, *Clerk.*

[5-cent U. S. internal revenue stamp.]

121 *Exhibit D¹.*

Circuit court United States, Massachusetts district.—May term, 1865.

SIMON WING
vs.
CHARLES F. RICHARDSON. } In eq.

This cause came on to be heard upon the bill, answer, replication, and proofs exhibited by the parties, and the same having been argued by counsel and considered by the court, it is now declared and adjudged that the letters-patent in the said bill mentioned are valid, and that the respondent hath infringed the same.

And therefore it is ordered, adjudged, and decreed that the said cause be referred to George S. Hillard, one of the masters of this court, to take an account of all such gains and profits as the said respondent hath received by reason of his infringement of the said letters-patent of the complainant; and in taking said account the master is authorized to examine the respondent on oath, and to cause the said respondent to produce before him all books and papers pertinent to the inquiry by him to be made.

And it is further ordered, adjudged, and decreed that the said respondent, his servants and agents, are, and each of them is, enjoined and commanded not to continue to infringe the said letters-patent of the complainant; and this last order is to continue and be in force until the further order of the court, and all further directions are reserved until the coming in of the report of the master.

By the court.

J. G. STETSON,
Clerk pro tem.

122 CIRCUIT COURT UNITED STATES, *Massachusetts District:*

I, John G. Stetson, clerk of the circuit court of the United States for the first circuit and district of Massachusetts, do hereby cer-

tify that the foregoing is a true copy of a decree in said cause of Simon Wing, in equity, vs. Charles F. Richardson.

In testimony whereof I have hereunto set my hand and the seal of said circuit court this fourteenth day of June, A. D. 1865.

[L. S.] JOHN G. STETSON, *Clerk.*

[5-cent U. S. internal revenue stamp.]

123 Circuit court of the United States, northern district of New York.—In equity.

By consent of counsel, without notice further than is contained in defendant's answer, the defendant introduces Samuel J. Thompson as a witness on his behalf, who, being duly sworn by the commissioner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Samuel J. Thompson; I am forty-four years of age; I reside in the city of Albany, N. Y.; and am a photographer by profession and practice.

Q. 2. How long have you been engaged as a photographer, or picture-maker by photography?

A. I have been so engaged since 1847.

Q. 3. How long have you carried on the business as principal?

A. All but one year of that period.

Q. 4. Have you examined Southworth's patent, and the reissue thereof, and the specifications therein referred to in the plaintiff's complaint in this suit, so that you understand the claim in the patent and in its reissue, and the principles upon which said claim is founded, and the mode of operating under the plaintiff's patent?

A. I have examined, and understand the claim and the principles upon which it is based, and the mode of operating under such patent.

Q. 5. How long ago did you see photographers use camera
124 boxes in connection with the sliding plate-holder, which made more than one photographic picture without removing the plate-holder from the camera box? If you have seen such, state when and where, and by whom used, and how many pictures were made without removing the plate-holder from the camera box.

A. I saw them the first year I went into business, which was in the fall of 1847, in Douw's Buildings, in the city of Albany; such box was used by me at that place in taking pictures at that time, and it made two pictures without removing the plate-holder from the camera box.

(Plaintiff's counsel objects to the last question and answer. To the question, on the ground that it instructs the witness as to the nature of the answer he is to give, and how to give it, and is leading. And the answer is objected to on the ground that it is given under instructions from the defendant's counsel by the question. And the plaintiff's counsel asks that both the question and answer be stricken out for the reasons given.)

Q. 6. Did you, at the time referred to in the last question, know of any other photographers using, in making photographic pictures, the camera box, with the sliding plate-holder, which made more than one photographic picture without removing the sliding plate-holder from the camera box?

A. I know that Beekman Cook used it at the Exchange Buildings in Albany at that time; he taught me how to use it; I also saw pictures that were made at Meades Brothers in Albany; there were two of them on a plate; I mean photographic pictures.

Q. 7. Was there any other means known at that time of making two photographic pictures on a plate except by the sliding plate-holders?

(Plaintiff's counsel here wished to call the attention of the court to the manner in which the questions are propounded to this witness, as they are calculated to lead the witness and instruct him as to the answer desired.)

A. I did not know of any other means.

Q. 8. Did you know that Meade & Brothers made and sold photographic pictures, more than one on the same plate, after the year 1847; and, if so, how long did they so make and sell photographic pictures with the sliding plate-holder, and with more than one picture on a plate?

125 A. I don't know that they did sell any of them, and I don't know that they made them with the sliding plate-holder, as I did; I was not in their operating-rooms; I only saw the pictures made there. Operators at that time were cautious not to let others know how or by what process they produced their pictures.

Recess for dinner.

At 3 o'clock p. m. the direct examination of Samuel J. Thompson was resumed as follows:

Q. 9. Did you know of any other mode of making photographic pictures, with more than one picture on a plate, at the time you say you saw such photographic pictures made by Meade & Brothers, as mentioned by you in your answer to the sixth interrogatory, than by the sliding plate-holder, which was used to make more than one picture on a plate without removing said plate from the camera box, as you have described their manufacture in some of your answers herein, by yourself and Cook, in Albany?

(The plaintiff's counsel makes the same objection to the last question as he has made heretofore, and calls the attention of the court to the form of such questions, as before.)

A. There was no other mode of making such pictures at that time, that I know of, and if there had been, I think I should have known it.

Q. 10. Did you continue to see from time to time, after 1847, in the photographic gallery of Meade & Brothers at Albany, photographic pictures made with more than one picture on a plate, until the time Meade Brothers stopped business at Albany?

A. I did.

Q. 11. Please state how the principles and operation of the cameras used by yourself and Cook, with the sliding plate-holder, as before described by you, and as used by you and him in making pictures, compare with the principles and operation of the camera described in the claim of the plaintiff in the reissued patent in this suit?

A. The principles and the operation are the same; that is, in making pictures by myself and Cook, we worked upon the same principles, and used the same mode of operation.

126 The witness, being cross-examined by the plaintiff's counsel, further testified as follows:

Q. 1. Are you familiar with the drawings, descriptions, and claims of letters-paten tupon mechanical inventions?

(Defendant's counsel objects to the question, as calling for testimony entirely immaterial and foreign to the questions in issue in this suit and to the claims of the patent referred to in the complaint herein.)

A. I am, somewhat.

Q. 2. How many patents upon mechanical inventions have you ever examined and studied since the year 1847?

(Defendant's counsel objects to the question as calling for immaterial testimony.)

A. Two or three.

Q. 3. What inventions, and what patents thereon, and when and where, did you make the examinations spoken of in your last answer?

A. On the bromide patent and patent ambrotype, and the sealing of pictures with balsam, known as the Cuttings patent, and the patent hallotype.

Q. 4. For what purposes did you make the examinations spoken of in your last answer, and under what circumstances were they made?

A. I made them to see if I could protect myself in the use of them, as I had bought them before I had examined them thouroughly; that is all I studied them for; I procured copies of them.

Q. 5. About how many patents upon mechanical inventions have you personal knowledge of?

(Defendant's counsel objects to the last question as calling for immaterial testimony.)

A. I have looked over the patent you have here, since I have been here, and examined the drawings and specifications and claims thereof; I have worked on other patents, from the drawings; I am a mechanic, and made patterns from the drawings, as requested; I understood the principles of them.

Q. 6. What patents, and what drawings have you worked upon, and when and where, as testified to in your last answer?

127 A. In 1846 and 1847 I worked on a patent bridge in Massachusetts, and on patent bee-hives in Albany; I have done lots of that kind of work. I also worked on another patent bridge in Worcester, Massachusetts; I had charge of all the braces in that department. There was another boss who had charge of a portion of the work, and I of the branch I have spoken of. I also had charge of one of the spans of the bridge 190 feet long; it was a double-track bridge, built under the Howe patent, and I took the charge of one side, and another man of the other side of said bridge. I have made patent gates and patent drags from drawings. I could not enumerate all the work I have done. I worked seven years at carpenter-work.

Q. 7. From all your labors, as testified to in your last answer, from what did you work specifications or drawings, and by whom furnished?

A. From drawings; and the drawings for bridges were furnished by Stone & Harris, and the drawings of bee-hives by a man named Winslow. The drawings for the gates and drags were furnished me by Cæzar Stone, who is a builder, and of whom I learned my trade.

Q. 8. How did you know that the bridges you worked on, and the bee-hives, and the drags, and the gates, were patented?

A. I know the bee-hives were patented, for I knew the man who patented it. I don't know that the bridges, drags, and gates were patented, except by hearsay. I did not see the patent or specifications of the bee-hive; I only saw the drawings, and never saw either on the others.

Q. 9. Did you ever construct a machine of any kind from the descriptions given of the same in print or in writing? I mean to exclude therefrom drawings.

A. I have made articles from writings many times. People would write to me giving me a description of what they wanted, and I hav

made them accordingly. I have also made pictures from such descriptions, and am now making some.

Q. 10. What articles have you made in the manner testified to in your last answer?

A. I have made doors, sash, blinds, and lots of things. In my business people would write to me about pictures they wanted, and I have
128 made them from their descriptions. I can show letters from parties I have never seen, desiring things to be made for them, and I have made them according to orders. I have received letters from gentlemen in Kentucky describing pictures they wanted, and I have got them and forwarded them as ordered. I have also made pictures of all of Palmer's marbles for parties in New York with whom I have had no personal interview. I made pictures of that character to the amount of $4,000 in one year.

Q. 11. From what written or printed description of a mechanical and patented invention did you ever make the first article or thing?

A. I made ambrotypes from a written description, and also hallotypes from such descriptions.

Q. 12. What else, besides those named in your last answer?

A. Nothing else, except bee-hives, as I have before testified.

Q. 13. In what patent cases have you been examined as an expert upon mechanical patented inventions?

A. In no case except the present.

Q. 14. Have you examined the specifications of the patent in suit; and, if so, when, where, and for what purpose?

A. I have examined the drawings here, and I have seen a part of the specifications in Albany that covered the box and the holder. I never read the whole of the specifications. I examined it for the reason that we were all threatened with being sued.

Q. 15. What part of the specifications in the patent in suit did you examine for that reason, and about how often?

A. I examined that part of it at the last end containing the claim, as contained in the paper now before me, marked Exhibit B, Wing.

Q. 16. Have not you been threatened with litigation for an infringement of the patent now in your hands, and marked Exhibit B, Wing?

A. Not personally, except that Mr. Hill, a witness that has been examined here, told me that we would all be sued for such infringement; that they had tackled the artists in Troy, and intended to pursue those at Albany also. This was told to me by Mr. Hill some time ago, but since this suit was brought.

129 Q. 17. Are you now engaged in manufacturing pictures, or in operating the invention and improvements specified in the patent in suit, and embraced in the claim thereof?

(Defendant's counsel objects to the last question as calling for testimony wholly immaterial; that it is of no importance in settling the issues in this case, as to whether the defendant in this case has infringed upon the plaintiff's patent or not; or whether he is now infringing or not. And said counsel states to the witness that the witness can decline to answer this question if he chooses so to do.)

A. I decline to answer the question, because I should criminate myself. I do now, however, answer the question by saying that I do make them, and have made them, and shall continue to make them for anybody that comes to me. After I had given my answer as above, I further added that I had made such pictures ever since I had been in business, and should continue to do so. I commenced said business in 1847.

Q. 18. Where is the machine which you used in 1847, containing the invention and improvements described, set forth, and claimed in the patent in suit, in the manner testified by you in your last answer?

A. I cannot tell.

Q. 19. Where is the machine which, in 1857, ten years later than 1847, you used, and which contained the invention and improvements described, set forth, and claimed in the patent in suit?

A. I do not know.

Q. 20. Will you produce on this examination, and for the hearing of this cause, any machine or instrument containing the invention and improvements described, set forth, and claimed in the patent in suit, and used by you in the manner you have stated on this examination, in the year 1847, or during any year for ten successive years thereafter?

A. I could not produce such machine or instrument.

The witness, being further examined by the defendant's counsel, further testified as follows:

R. 1. What is the reason why you cannot produce the machine or instrument called for by the 20th cross-interrogatory just answered by you?

130 A. The reason is, as I stated in answering that interrogatory, that all of my photographic property was sold in 1864, on the dissolution of a partnership between myself and my then partner, and I do not know that I can now find or procure such instrument or machine. I am ready to furnish any proof or evidence in my power or within my reach.

SAMUEL J. THOMPSON.

Subscribed and sworn to before me this 6th day of September, 1867.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

Plaintiff's and defendant's counsel reserved the right to recall the last witness, if they shall hereafter see fit to do so.

And hereupon this matter was further adjourned to September 9th, 1867, at 10 o'clock a. m., at the same place, by consent of counsel.

1867, SEPTEMBER 9TH.

The parties, by their respective counsel, appeared at the appointed hour at the office of Norton & Cowen, esq's, in the city of Troy; and thereupon the counsel for defendant introduced Seth E. Parsons as a witness, who, being duly sworn by the commissioner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Seth E. Parsons; I am forty-one years of age; I reside at the city of Albany, N. Y.; I am a merchant there, dealing in India-rubber goods and photographic materials.

Q. 2. If you were ever engaged as an operator, making photographic pictures, state about when you began and how long you continued as such operator.

A. I commenced the business the first of November, 1850, as clerk and assistant in the operating department. The business was selling

131 daguerreotype materials and making daguerreotype pictures, and have continued selling photographic materials ever since. I am

now engaged in that business; but discontinued the making of pictures, say about the year 1852 or 1853. I cannot tell more exactly without reference to my books.

Q. 3. Have you ever manufactured photographic cameras and instruments for making photographic pictures, or fixed or repaired them or altered them? and, if so, state what period you have done it in.

A. I have done it ever since I have been in the business, more or less, and am still doing it.

Q. 4. State whether you have carried on the business described in your last answer extensively or not.

A. I have carried on a large business, and have done most, if not all of the business in that line, in the region of country around Albany, where is my place of business, covering Albany, Rensselaer, Washington, Saratoga, and Schenectady Counties, and other places.

Q. 5. Have you manufactured or repaired cameras, with the apparatus for making photographic pictures, of the different kinds and styles in general use by the photographic operators and profession since 1850?

A. I have.

Q. 6. Have you manufactured cameras, and the apparatus connected with them for making photographic pictures, which contained the principles and were operated in the manner as various cameras and instruments in general use by the photographic profession for a number of years last past?

A. I have; I mean that I have made the camera boxes and other apparatus, not including the lens.

Q. 7. Have you seen camera boxes that had the sliding plate-holder that was made to make more than one photographic picture on the same plate without removing the plate-holder from the camera box? If so, state when and where you first saw such a camera box, with such a plate-holder, so made.

(Plaintiff's counsel objects to the last question as immaterial.)

A. I have seen such camera boxes, with such sliding plate-holder
132 so made; I first saw such an apparatus at Albany, at Mr. Sisson's photographic establishment, in the year 1851; I recollect it was in that portion of the year when there was snow on the ground; my impression is, it was in the spring of that year, just previous to the closing of the course at the medical college at Albany; the Mr. Sisson spoken of by me is Mr. Noel E. Sisson.

Q. 8. Did you, about the year 1851, repair or make over a camera box with such apparatus as is described in the last question and answer? and, if so, state whether or not it was the box and apparatus you referred to in your last answer, and for whom you made it over or repaired it.

A. I did repair such a box and apparatus as is described by me in my last answer, about the time mentioned in the last question, and I repaired it for Mr. Noel E. Sisson, by whom I was employed at that time; it was the identical instrument spoken of by me in my last answer, which was the first camera box, with the sliding plate-holder, made as before described, that I had then ever seen.

Q. 9. Did you make, or repair, or alter, a camera box that contained the sliding plate-holder that made more than one photographic picture without removing the plate-holder from the camera box, for, or that was used by, Mr. Daniel Denison, the photographist, of Albany? If so, state when you first made, altered, or repaired the same for him, or one that he used.

A. I did alter a camera box that contained such sliding plate-holder, so that two pictures could be made without removing the plate-holder;

this was the same box I have before referred to; it belonged to Mr. Sisson, but it was altered for the use of Daniel Denison, who was then an employee of Mr. Sisson; this was done in about the year 1851.

Recess for dinner.

3 O'CLOCK P. M.

The testimony of the last witness resumed as follows:

Q. 10. Please state how many photographic operators and picture-makers who, to your knowledge, if any, used the camera box,
133 about 1851, with the sliding plate-holder that made more than one photographic picture, by moving the plate over the field of the lens in the camera box, without removing the plate-holder from the camera box? State the name or names, or persons or firms, or places where they were so used.

(Counsel for plaintiff objects to the last question, 1st, that it is leading, suggestive, and assuming; that the counsel for defendant should ask the witness to describe the instrument, and not describe them himself in his question, and then ask the witness if he had seen them; that up to this time the witness has not stated, as the question assumes, that he had seen any camera that produced pictures by moving the plate over the field of the lens.

Defendant's counsel objects to the last statements made by the plaintiff's counsel as cumbering the minutes, and improperly and illegally entered upon these minutes, and he asks to have them stricken out.)

A. I cannot now state how many; but I know of three persons who operated that instrument in that way at that time; I mean the instrument I have spoken of in my former answers that I have altered; they were Noel E. Sisson, Daniel Denison, and myself; we used it at Mr. Sisson's establishment in Broadway, Albany.

Q. 11. In the use of the camera box, with the apparatus connected therewith, which you have referred to in your last answer, did the photographic operator, in making pictures therewith, as you have described, slide the plate-holder in making pictures over the field of the lens or not?

(Plaintiff's counsel objects to the last question as leading and instructing the witness as to the answer desired by the counsel, instead of asking him to describe the construction and operation of the instrument.)

A. He did slide the plate-holder over the field of the lens.

Q. 12. Describe the operation and manner of the photographic operator, in the use of the camera box and apparatus connected therewith, referred to in the last question and answer, in making photographic pictures, more than one on a plate, without removing the plate-holder from the camera box.

A. In order to make two pictures on the same plate it is necessary to cover up one-half, or as much of the plate that we did not wish to
134 cover with the picture, at what we call making the first impression, in order to prevent the light from reaching that portion of the plate; in this instrument we covered the lower half of the box and inserted the plate-holder in the grooves prepared for it, and drawing the slide of the holder half way out, leaving the lower half of the plate exposed to the action of the lens, then pushing the plate-holder to the bottom of the box, and then drawing the slide so as to expose the upper half of the plate, thereby producing two impressions on the same plate without removing the holder from the box; in making the two impressions it is necessary to have one-half of the plate covered from the action of the light, alternately, the partition or covering put into the box, as

I have stated, shielding one-half of the plate during one operation, and the slide shielding the other half during the other operation; it was customary to turn the camera box upon its side, and insert the plate-holder horizontally; I mean by the bottom of the box that end of it which is opposite to the end in which the plate-holder is inserted.

Q. 13. State how, in the operation of the camera box and the sliding plate-holder, the operator, in making more photographic pictures than one, moved the plate-holder in reference to the field of the lens?

A. The lens remained stationary in its usual position in the box, and the plate passed over the field of the lens through the opening left uncovered; sometimes we moved the lens, but not usually, as it required too much trouble.

Q. 14. State how early or about what time you first saw photographic pictures that had been made with more than one picture on the same plate; state when you first saw them, and where, and in whose possession.

A. I think the first that I saw were made at our own establishment in 1851; I saw them in Meade's gallery, Meade Brothers, at Albany; at R. E. Churchill's gallery, also at Albany; and I also saw one, said to be made by James B. Green, in Albany, in possession of some person at Albany, whose name I cannot now recollect; I saw all of them about the same time in or about the year 1851, when I first engaged in the business.

Q. 15. Did you ever know a photographer at Albany by the name of James B. Green; and, if so, did he go to California?

A. I know such a man; he is now my partner; he went to California, as I understood from him and others, about the year 1849.

135 Q. 16. State whether there was any other mode of making photographic pictures, more than one on a plate, in 1851, and before that, to your knowledge, other than by the sliding plate-holder as used by you in 1851, as you have hereinbefore described, without taking the sliding plate-holder out from the camera box.

A. I know of no other.

Q. 17. Did you hear the testimony of Samuel J. Thompson, in this case in reference to the camera box and sliding plate-holder, which he used in the fall of 1847?

A. I heard his testimony in reference to the box he spoke of in his testimony.

Q. 18. Have you seen that box and the apparatus connected with it?

A. I have not seen the identical box that he spoke of, but I saw one he had here, which, he said, was the same in construction and operation.

Q. 19. How did the box which you have described herein, and the apparatus connected therewith, as having been used by you in 1851, compare in principle and operation, in producing more than one picture on the same plate, without withdrawing the plate-holder from the camera box, with the camera box and plate-holder, and apparatus connected therewith in the reissued patent claimed by the plaintiff in this suit?

(The plaintiff's counsel objects to the last question, upon the ground that the witness is not shown to be acquainted with the plaintiff's patent.

Answer to the last question waived for the present.)

Q. 20. Have you examined the plaintiff's reissued patent, proved, or attempted to be proved, in this action, and examined the specifications and drawings, and claims of the patentee therein; and, if so, do you understand the same, and the principles and construction, and operation of the instrument named in said reissued patent?

A. Yes, sir.

Now please answer the above question, No. 19.

A. I consider the principle of producing the pictures substantially the same.

136 The further examination in this matter is adjourned by consent of counsel, to the 10th September, 1867, at 10 o'clock a. m., at the same place.

1867, September 10, at 10 o'clock a. m., at same place, the examination of the witness Parsons was continued.

Q. 21. Are Mead Brothers, of Albany, photographers, referred to in yours and Thompson's testimony, living or dead?

A. They are reported to be dead. I have seen notices of their death, respectively, some ten or twelve years ago.

Q. 22. Were other photographers beside yourself acquainted with the principal and mode of making photographic pictures more than one upon a plate, with the sliding plate-holder, without removing the plate-holder from the camera box, in 1850, after the manner described by you in your testimony given herein yesterday? If so, state how you learned the fact, and state the names of said photographers who had such information, and where they lived.

(Plaintiff's counsel objects to the last question—

First. That it is scandalously leading, and calls the attention of the court to the manner in which the question is put.

Second. That the witness has already sworn that he first saw pictures taken in that manner in 1851. The question necessarily calls for hearsay evidence.

Counsel for defendant moves to strike out the indecorous language of the plaintiff's counsel, to wit, the word "scandalous," and he calls the attention of the court to the use of such indecorous language in the presence, and against the dignity, of the master or commissioner, before whom this testimony is taken.)

A. There were others acquainted with such principle and mode at that time; I learned it from this fact: that I was instructed to make such box and plate-holder by persons who had said they had used this same process, and they instructed me how to alter and make such box and plate-holder, in 1850. I thought, in my examination yesterday, it was in 1851, but from inquiries and investigations made since yesterday, I am satisfied it was in 1850. In 1850 I frequently heard photographers describe the principle and mode of operating, in making such pictures. The names of such photographers are Daniel Denison, of Albany; James Irving, of Albany; and S. J. Thompson, of Albany.

137 I do not now remember any others; but there were undoubtedly others whose names I cannot now recall.

(Plaintiff's counsel objects to the latter part of the last answer, except as to Thompson, upon the ground that no notice is given in defendant's answer of the other persons having such knowledge.)

Q. 23. In 1850 and 1851, had you heard of the Southworth invention, referred to in the patent in suit, or had you any knowledge of it or not?

A. I had then no knowledge of his invention, nor had I then heard anything of it.

Q. 24. Did you ever have any correspondence or talk, or both, with the plaintiff in reference to your making or selling camera boxes and the apparatus belonging thereto, covered by the patent in suit?

A. I did; I have talked with Mr. Wing in regard to his patent, and I

have also received letters from him on that subject. I have met him in New York, and at my office in Albany, and had conversations with him in relation thereto. My communications with him on the subjects began, I think, in 1861, and on several occasions between that time and up to about two years ago.

Recess for dinner.

At half past two o'clock p. m., the examination of the witness Parsons was resumed.

Q. 25. In your talk and correspondence with the plaintiff in reference to his camera box and the apparatus thereto belonging, covered by his patent in suit, or any other box and apparatus covered by the principle of the sliding plate-holder, did he give you any authority to make and sell the same?

(Plaintiff's counsel objects to the last question as immaterial.)

A. He did.

(Defendant's counsel reserves the right to further examine this witness if he shall see fit to do so.)

The witness being cross-examined by the plaintiff's counsel, further testified as follows:

Q. 1. Are you a party to any agreement, or a member of any association formed for the purpose of resisting the patent in suit?

138 A. I am not. I do not know of any such association or agreement.

Q. 2. Can you produce the camera box described by you on your direct examination, which you say you made or altered in 1850 or 1851?

A. I do not know that I can.

Q. 3. Can you produce any pictures made in 1850 or 1851 by the process you have described?

A. I cannot say that I can.

Q. 4. How do you fix the time when you say that you first altered the box in the manner you have described?

A. I fixed it in reference to two or three facts; the first is, that I went into business on the first of November, 1850, and a party who was employed with me was in the establishment about the time that I altered the box referred to; his name is Daniel Denison, and was employed with me by Noel E. Sisson, at the time. Sisson, about that time, bought out the stock part of the business of Meade Brothers, at Albany.

Q. 5. How long did Denison remain in the business with you?

A. He was at work at Sisson's when I went there, and he must have left in 1852.

Q. 6. If Denison was there from the time you went there until 1852, how does the fact that he was there enable you to fix the time in 1850?

A. The mere matter of his being there does not of itself enable me to fix the time within six months or a year, but there are several circumstances that occurred while he was there that help to guide me in fixing the time.

Q. 7. What are those circumstances?

A. He had relatives going to school there at the time, and he made some pictures of a group of medical students after the box was altered. Another fact is, that Mr. Irving was also there at Sisson's, and I altered the box while he was there, or within a short time after. He did not stay there but a short time, and I recollect consulting him about it. I cannot state how long Irving remained there without examining the books.

Q. 8. Did you take any memorandum of the alteration of the box at the time you made it?

A. I did not.

139 Q. 9. Will you swear positively that it was in 1850 that you altered the box?

A. No; I could not swear positively that it was in 1850.

Q. 10. Can you swear positively that it was previous to 1852?

A. Yes. I think there cannot be a possibility of doubt that it was before 1852. I cannot answer more positively without looking at my books.

Q. 11. What has become of the camera that you altered?

A. I do not know what has become of it. The establishment has changed hands so many times since I altered it that I cannot trace it.

Q. 12. When did you next make or alter a camera of the kind you have described in your direct examination?

A. I don't know that I ever fixed more than one besides that, and I cannot say positively that I did any just like it; that is, like the one I have described. I have made other boxes, but not like this.

Q. 12. Have you sold boxes in the way you have described in your direct examination?

A. I don't know that I ever fixed more than one besides that, and I can't say positively that I did any just like it; that is, like the one I have described. I have made other boxes, but not like this.

Q. Have you sold boxes made in the way you have described in your direct examination in the course of your business?

A. I have not.

Q. 14. State the manner in which you altered the camera box which you have described.

A. I fitted a thin piece of board into the camera box in such a manner that it would shield one-half of the plate from the action of the light, such piece being fitted to cover the lower half of the plate; then I also marked the plate-holder, and this slide fitted into the same, so that when I put the plate-holder into the camera these marks would serve to guide me in getting the plate into the right position. In operating the instrument to produce two pictures, it was necessary to insert the plate in the grooves prepared for its reception, and pushing the plate down to the requisite mark, and drawing the slide half way

140 out, or to the mark on the slide, and exposing the plate to the action of the light, produced an impression on one-half of the plate; then pushing the plate-holder to the bottom of the box, and drawing the slide out, exposing the other half of the plate to the action of the light, produced the other picture. It was customary to turn the camera on the side when taking the pictures in this way. What I mean by the bottom of the box is the opposite side to that in which I introduced the plate-holder.

Q. The thin piece of board of which you speak was interposed between the plate-holder and the lower half of the front of the box, was it not?

A. It was placed between the plate-holder and the lens or front of the box, directly in front of the holder, and as close as possible, so that the plate-holder could be moved out and in, without removing the thin piece from its position.

Q. 16. Then this thin piece was on a direct line between the plate-holder and the lower half of the lens?

A. Yes.

Q. 17. You stated that sometimes in camera boxes of this description the tube was moved also. Why was that?

A. In getting the focus for this style or kind of picture, we would move or trip the box in order to bring the focus of the tube on the upper half of the plate; the same result could be obtained by tipping the tube, but it was seldom used on account of the trouble of doing it.

Q. 18. This thin board spoken of by you, covering one-half of the lens; if the box remained stationary, the picture would be taken by the other half of the field of the lens, would it not?

A. The thin board spoken of does not cover the lens, but one-half of the plate, and the focal point of the lens upon the plate would depend upon the position of the box, as the camera stands for holding the camera box while making pictures are made with a hinge-top for the purpose of throwing the image upon any desired portion of the plate.

Q. 19. Suppose the camera is turned on its side, as you have described, and the sitter to be exactly in front, would not the image be formed at the edge of the board which shades the lower half of the plate?

141 A. Not necessarily so, as the focus could be drawn on either half of the plate, according to the position of the box; for the same effect could be produced by changing the image from one part of the plate to the other while the box is on its side, the same as it could be done by tipping the box in its upright position.

Q. 20. Then in order to throw the image on the exposed part of the plate, was it not necessary to turn the box a little askew in regard to the sitter?

A. Yes.

Q. 21. How many pictures could be made on the same plate in the box that you made or altered, and have referred to?

A. But two.

Q. 22. You stated in your direct examination that the principle and operation of this box, altered by you, was substantially the same as the invention described in plaintiff's reissued patent. Did you mean to say that the construction and operation of the two were the same?

(Defendant's counsel objects to the last question as it stands, as calling for immaterial testimony; because it assumes, in substance, that the witness, in his direct examination, spoke of the construction of the instruments referred to, when in fact he only spoke of the principles involved in the several machines he testified in relation to, and of their several operation in making photographic pictures therewith.)

A. I said that the principle and the operation were the same, but the construction of the two is not the same, for one is made for making two pictures and the other for making four pictures on a plate.

Q. 23. Is that the only difference in the construction?

A. No; the plate below is differently made; it is made not to slide in the box, but to slide into a frame placed in the box, in the plaintiff's invention. In order to bring the different points of the plate within the field of the lens, the plate-holder is constructed with a moveable frame or inside plate-holder, moving horizontally and vertically, thereby producing four pictures on one plate, and by making four pictures on one plate, and having each picture cover one-quarter of the

142 plate, it is necessary to construct the holder with those movements; that is, horizontal and vertical when the operation is performed with one tube. In the box I altered I brought the different parts of the plate into the field of the lens in the manner I have de-

scribed, making only two impressions on a plate; therefore, in my opinion, the effect produced is substantially the same in each instance.

Q. 24. Is not another difference, that in the box you altered one-half of the plate was protected from the light by the thin board you have described, or by the slide, while in the plaintiff's invention the whole plate was protected from the light by the front part of the frame, with the exception of the aperture directly in line with the lens?

A. Yes, sir; from the fact that in one instance three-quarters part of the plate is covered, and in the other only one half of the plate is covered.

Q. 25. In the camera which you altered, was the exposed portion of the plate directly opposite the axis of the lens or not; or was it a little one side?

A. It was a little one side.

Q. 26. Is not the exposed portion of the plate, in the invention described in the reissued letters patent, marked Exhibit B, Wing, directly opposite the axis of the lens?

A. Yes.

Q. 27. In consideration of the differences in construction which you have stated, what do you mean when you say the principle of the two is the same?

A. I say they are the same from the fact that in each instance the different pictures are procured by bringing their several parts into the field of the lens, and exposing them successfully to its action, and that it is not necessary in making such pictures with such instruments to have the centre of the axis of the lens in a direct line with the centre of the exposed portion of the plate, which fact is seen by taking two or more persons together on one plate, and each or all of such pictures being equally perfect, showing conclusively that is only necessary to have such aperture in the plate-holder as is described in said reissued patent, brought within the field of the lens, and that can be done and has been done successfully by the box that I have described as having been altered by myself.

143 Q. 28. What do you understand to be the principle of the invention described in Exhibit B, Wing?

A. I understand it to be the producing of two or more pictures on one plate with one lens, without removing the plate from the camara box, by moving the plate-holder or the lens.

Q. 29. If you should cover one-half of the plate with a slide and take a picture on the exposed half and then remove the slide and take a picture on the other half, without moving the plate, would that, in your opinion, be Southworth's invention substantially?

A. It would not, unless the holder was moved or the lens.

Q. 30. Do you [you] understand that the invention is the same in principle whether the holder or lens is moved; and, if so, what makes them the same?

(Def't's counsel objects to the last question, because it calls for immaterial testimony. It asks for a comparison between the principle involved in the movable slide and the moving of the tubes, which two things are not claimed in the reissued patent, and it is not claimed in this suit, nor in the plaintiff's testimony therein, that the defendant has used in any way the movable tube, nor infringed upon the principles covered by a moveable tube.)

A. I do think the invention is the same in principle, from the fact that in one instance the plate moves before the field of the lens and would

produce two or more impressions, and the lens could be moved over the plate producing the like result.

Q. 31. Do you say that, in your opinion, any instrument which produces more than one picture upon the same plate by moving either the plate-holder or the lens, is substantially the same as the Southworth patent, without respect to its construction?

(Defendant's counsel objects to the last question, for it calls for testimony comparing instruments in no way referred to in this case by the pleadings or testimony.)

A. Yes, sir; I think it comes under his claim.

The further testimony in this suit is postponed to September 11, 1867, at 10 o'clock a. m., at the same place.

144 At 10 o'clock a. m., of this eleventh day of September, 1867, at the office of Messrs. Cowen & Norton, in Troy, the further taking of testimony in this action was resumed, the counsel for both parties being present, and the counsel for defendant introduced as a witness George W. Pine, who, being duly sworn by the commissioner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is George W. Pine; I am thirty-eight years of age; I now reside at Syracuse, N. Y.; I am a dealer in tea and coffee.

Q. 2. Were you formerly a photographer? and, if so, state about when you entered into the business as a learner or as principal, and how long you continued in it, and where.

A. I was formerly engaged in the photographic business, and commenced it as principal about the year 1848, and continued it to the year 1866, at various points in the United States at the city of Troy for the greater portion of the time, and also at the town of Lansingburgh, N. Y.; and in the town of La Grange, Troup County, Georgia; in West Troy, N. Y.; Cohoes, N. Y.; in the towns of Greenwich, N. Y.; Cambridge, N. Y.; Salem, N. Y.; Easton, N. Y.; and at other places in the State of New York.

Q. 3. What comprised mainly your business?

A. My principal business was the making and selling of photographic pictures, and in making and fixing my apparatus to meet the demands of the public in that trade and business.

Q. 5. During the time that you were so engaged in photographic business did you study and become acquainted with the various machines and apparatus used by different photographers in different parts of the country which were used in making photographic pictures?

(Plaintiff's counsel objects to the last question on the ground that it is leading, thereby instructing the witness how to answer.)

A. I examined the machines used by different persons engaged in the photographic business in various parts of the country, and became acquainted with the principles and operation of them.

Q. Have you examined the reissued patent in this suit marked Exhibit B, Wing, and the specifications and the drawings and claim of the patent, and do you understand the same?

A. I have examined it, and I think do understand it.

145 Q. 6. Please state if you are, from your own practice, acquainted with the principles and mode and manner of making photographic or ambrotype pictures with a camera box that is used with a sliding plate-holder that makes more than one photographic picture upon the same plate by moving the plate over the field of the lens with-

out removing the plate or plate-holder from the camera box during the operation.

(Plaintiff's counsel objects to the last question, 1st, as leading; 2d, it instructs the witness as to his answer; and, 3d, the nature of the question requires of the witness to state and to repeat as his answer the subject-matter contained in the question itself; and further, plaintiff's counsel would especially call the attention of the court to the questions propounded to this witness.)

A. I am.

(Plaintiff's counsel now objects to the question and answer both, for the reasons above given, and asks the court to strike them out of the evidence.)

Q. 7. How early did you first become acquainted with the mode of making photographic pictures, more than one upon a plate, without removing the plate-holder, or plate, or both, from the camera box, and in the operation bringing the plate successively over the field of the lens?

(Plaintiff's counsel here interposes the same objections that he did to the last question.)

A. In the year 1852 I made four pictures upon one plate, by means of a plate-holder constructed by myself, by which I brought different portions of the same plate successively in the field of the lens and axis of the instrument without removing the plate-holder or plate, or either, from the camera box.

Q. 8. Have you with you a drawing or model, made by yourself, describing substantially the instrument so made and used by you, and referred to in your last answer? If so, show said model to the commissioner, and explain the same, and if it is lettered, explain what each part lettered represents in the model, and how it was used in making the pictures referred to by you, and explain all the parts of the model, and explain how said pictures were made by said instrument.

146 A. I have such a model made by me and I here produce it; it is lettered, in part, in pencil. Letter A represents a board which was fitted in the camera box directly in front of the object-glass of the camera, or directly in front of where the plate is introduced into the camera box. Letter B represents an opening in the centre or axis of the instrument, said opening being in a direct line with the centre or axis of the tube. Letter I denotes a cleet attached to said board to guage or direct the perpendicular movements of the plate-holder. Letters J and K represent cleets upon the left and right respectively of the opening B to guage the horizontal movements of the plate-holder. Letter M represents a plate-holder, similar in its construction to the one made and used by me, for the purpose of making four pictures upon one plate by means of bringing different portions of the same plate within the field or axis of the lens, without removing the holder, or plate, or both, from the camera box, in the year 1852. Letter C represents the slide of the holder; by removing the slide it exposes the face of the plate contained in the holder. Letter D represents a frame inserted in the face or front of the holder, directly in front of the plate L, said frame D having four openings, thereby exposing four different points or parts of the plate, the board A covering three of said openings when the holder M is inserted in the camera box, and bringing one of said openings directly over the opening B in said board A, the holder M resting on the cleet I, attached to the board A and against the cleet J, thereby exposing the portion of the plate marked O to the action of the light, and thus producing a picture upon that portion of the plate; now, by the horizontal movement of the holder M to the right against the cleet K, the portion of the plate

marked P is brought over the opening B and in the field and axis of the lens, and thereby exposed to the action of light, thus producing a picture upon the portion of the plate marked P; then by a perpendicular movement of the plate-holder M, bringing it to the top and against the cleet K, the portion of the plate marked Q is brought within the field and axis of the lens, and over the opening marked B, thereby exposing that portion of the plate to the action of the light, thus producing a picture upon that portion of the plate; then by a horizontal movement of the plate-holder M to the top and against the cleet J, a portion of the plate marked N is brought within the field and axis of the lens,
147 thereby exposing that portion of the plate to the action of the light and thus producing a picture upon that portion of the plate, and so by the several movements I have described of the plate-holder, bringing successively different portions of the plate within the field or axis of the lens, producing four several pictures upon the same plate without removing the holder, the plate, or both of them from the camera box.

Q. 9. State whether, in the process you have described in your last answer, in producing each picture, the light fell directly and squarely upon the part of the plate exposed, or whether it came on an angle?

(Plaintiff's counsel makes the same objection to the last question that he has made to the former questions put to this witness.)

A. The light fell directly upon the face of the plate.

Recess for dinner.

Q. 10. Through what period did you use, or know of others using, the machine or instrument constructed and operated in the same way substantially which you have described the one used by you in making photographic pictures more than one upon a plate, without removing the plate, or plate-holder, or either of them, from the camera box, was conducted and operated? State from what period to what period, as near as you can recollect.

A. I used it myself from 1852 to, I should say, the year 1856, and perhaps 1857. I commenced using it in the latter part of the year 1852, and I know of others using it during the same period, or apparatus similarly constructed and operated. They were worked upon the same principle.

Q. 11. State whether you know from your experience, from conversations with and explanations made by other photographic operators beside yourself, that said photographic operators were acquainted in 1852 with the construction and operation, and the principles embraced in the operation of photographic apparatus made and operated in the way and manner that you have described the construction and use of the machine made and used by you, in answer to the question No. 8 of this your examination. If so, give their names.

(Plaintiff's counsel objects to the last question, 1st, as leading; 2d, as calling for heresay and the inference of the witness; 3d, as incomprehensible.)

148 A. There were others that were acquainted with the workings and principles of this apparatus during the period mentioned. One of such operators was Nathan C. Pine, who then resided in the State of Georgia. Another was Mr. Dill, whose given name I do not now recollect, and he also was a resident of Georgia. I can recall the names of no others at this time.

Q. 12. Did you ever hear, learn of, or know anything of this Southworth invention referred to in suit prior to the year 1855?

A. No.

(Plaintiff's counsel objects to the last question and answer upon the grounds hereinbefore stated by him on the examination of this witness.)

Q. 13. State, if you know, what has become of the photographic apparatus described as made by you in answer to question No. 8, and of which you have presented a model, which is here marked by the commissioner Exhibit M, Schoonmaker. And state especially if you have got it, or know where it is, if it is in being.

A. I have not got it in my possession, nor do I know where it is. It was left by me in a picture-car, then located in the town of Cambridge, Washington County, N. Y., since which time I have seen or known nothing of it; said car having been disposed of by me to other parties, in the year 1857, I think.

Q. 14. With ordinary use and wear of a camera box, and apparatus for making photographic pictures, how long will they last without wearing out?

A. I have had holders rendered unfit for use by one year's service. I would say that, generally, three years' use of plate-holders would render them unfit for further use.

Q. 15. Did you hear the testimony of the witness Parsons yesterday, herein, in relation to the camera box and the apparatus connected therewith, made and used by him in Albany in 1850 or 1851, and in reference to the manner of his using it in making photographic pictures more than one upon a plate? If so, state how the principles involved in its operation in its use by him and in the manner of making pictures therewith, compare with the principles involved in the use of and in the manner of making photographic pictures by the invention and instruments referred to in the reissued patent marked B, Wing, in suit?

149 (Plaintiff's counsel objects to the last question on the ground that the witness is incompetent to answer it, it having nowhere appeared during the examination of the witness that he has ever heretofore been examined as an expert witness in any patent matter or suit, or that he is in any other way or manner competent or qualified to answer upon a question concernining such matters.)

A. I heard the testimony of Mr. Parsons yesterday in relation to the apparatus made and used by him in 1850 or 1851 for the purpose of making more than one picture on the same plate. I consider the principles involved in the two to be the same, as in the use of each successive pictures are produced by bringing different portions of the same plate within the field of the lens.

Q. 16. How do the principles involved in, and the use and operation of, the photographic instrument which you have testified that you made in 1852, in making photographic pictures four upon a plate, in the manner described by you in your answer to question No. 8, compare with the principles involved in the use and operation of the invention in the reissued patent marked Exhibit B, Wing, in suit?

A. I consider them identical, the same.

(The plaintiff's counsel objects to the last question and answer for the same reasons that are hereinbefore set forth and stated.)

The witness, being cross-examined by the counsel for plaintiff, further testified as follows:

Q. 1. Have you ever been examined as a witness, expert, or otherwise, in any patent suit prior to this?

A. I have not.

(Defendant's counsel objects to the last question and answer, on the ground of their immateriality, in season.)

Q. 2 Have you examined the patent in suit?

A. I have examined the model exhibited here by the parties.

(The witness here asks for the exhibit of the commissioner.

The counsel for the plaintiff refuses to allow the witness here to examine the Exhibit B, Wing, or any other exhibit in the case, and the commissioner who has the possession of Exhibit B, Wing, and of Exhibit A, Wing, declines to show them to the witness. The above state-
150 ment is made by the defendant's counsel, and the defendant's counsel further insists that it is the right of the witness, before he answers the last question, to examine the Exhibits A and B, Wing, in order that he may answer the last question, and especially that he may examine them that he may determine correctly whether said Exhibits A, Wing, or B, Wing, are the original patents, or certified copies thereof from the records of the original patent or patents at Washington.

The plaintiff's counsel, in answer to the statements made by the defendant's counsel, says that he has not by his last question inquired of this witness in relation to any exhibit in the case, and that he merely desires to know of this witness whether he has examined or not the patent upon which this suit is brought.

The witness further answers that he has examined what purports to be a certified copy of the patent in suit.)

The matter is here adjourned by consent of counsel to September 12th, 1867, at 9 o'clock a. m., at the same place.

1867, Sept. 12th, at 9 o'clock a. m., the counsel for both parties appeared at same place, and the cross-examination of the witness Pine was resumed.

Q. 3. When, where, and for what purpose did you make this examination spoken of in your last answer?

A. I examined them yesterday, the 11th of September instant, at this office, in presence of Examiner Lamport, for the purpose of ascertaining if the principles involved were the same as those used by myself in 1852, and I became satisfied that they were the same in the operation of making two or more pictures upon the same plate. I also examined the drawings, specifications, and claims, for the purpose of learning the peculiar construction and manner of operating, in a mechanical point of view. This is all I have to say.

Q. 4. Did you ever make any other examination of this patent in suit than as already testified to by you in your answer to the last question?

A. I have made a partial examination of it this morning.

Q. 5. Have you ever made any other examination of said patent than you have testified to in your last answers?

A. I have not.

151 Q. 6. Will you please state whether or not you claim to have made the invention described by you on your direct examination, in the year 1852, the time fixed by you in that examination as the time when you made and constructed a device represented by Exhibit M, Schoonmaker, produced by you in your answer to question 8 of your direct examination?

A. I do claim to have made it in 1852, and I claim to have been the original inventor of it at that time; and I further state that I had it under consideration at that time to patent it, but I concluded that I should be unable to get my money back that it would cost to procure

the patent, and I therefore abandoned it; that is, I abandoned the idea of getting a patent on it.

Q. 7. What steps, if any, at that time or any other time, did you take to protect and preserve the invention described by you, and alleged to have been made by you in 1852?

A. I made an apparatus or model, and used the same and kept it in my possession until the year 1856 or 1857; I think in 1857. I have during that time explained to other photographers the invention I had made, and the manner of using it in making two or more pictures on the same plate.

Q. 8. Did you take any other steps or measures to obtain a patent on your alleged invention, and about which you testified on your direct examination, than as stated by you in answer to the last question?

A. I ascertained the expense of procuring a patent. That is all I have to say on this point.

Q. 9. What became of the model you have testified about in your cross-examination?

A. It was left by me in a car—a photographic car—then located in the town of Cambridge, Washington County, N. Y., in the year 1856 or 1857, since which time I have known nothing of it.

Q. 10. Why did you not obtain a patent upon the invention which you say you made or discovered in the year 1852, and about which you testified on your direct examination?

A. Because I considered that I would not be able to get my money back.

Q. 11. Why did you consider that you would not be able to get your money back, as stated in your last answer?

152 A. Because I considered that there would not be men enough that would want to use it, or be willing to pay enough for it to cover the expense of procuring the patent.

The further examination adjourned by consent of counsel to Sept. 13th, 186–, at 9 o'clock a. m., at the same place.

1867, Sept. 13th, 9 a. m., at same place, the counsel for the respective parties appeared, and the cross-examination of the witness Pine was resumed as follows:

Q. 12. Has a suit been commenced against you by the plaintiff in this case for an infringment of the patent in suit?

A. There has been a suit commenced against me for an alleged infringement by Simon Wing, of a patent obtained by Albert S. Southworth for an infringement in photographic cameras, which I understand to be the same involved in this suit.

Q. 13. When did you make Exhibit M, Schoonmaker, which you have produced here in evidence?

A. I think it was on the 11th day of September instant; that is, I made the combination then, and I made it for the purpose of this suit, and for the purpose of showing an invention I made in 1852.

Q. 14. What enables you to fix the time of making such invention in the year 1852?

A. I fix the date from a journal or diary that I kept which I now have in my possession at my home in Syracuse.

Q. 15. Could you say without that journal, that you made such invention in 1852?

A. I can.

Q. 16. What else enables you to fix it at that time?

A. From my recollections of having traveled from the State of New York to the State of Georgia in that year.

Q. 17. Is this the only time you ever traveled from the State of New York to the State of Georgia?

A. It is.

Q. 18. How do you know that was in 1852?

A. I know it by the journal referred to, also by the dates of letters received from friends, and dates of letters written by me to my brother.

Q. 19. Why hav'n't you produced that journal?

153 A. I have not deemed it necessary, because I can fix the time from other reasons I have stated.

Q. 20. How many instruments like Exhibit M did you ever make? More than one?

A. I have made three different plate-holders like Exhibit M, that were used with the same kind of diaphram exhibited here; I recollect of making two different diaphrams like the one in Exhibit M, and described by me on my direct examination as board A.

Q. 21. What became of the plate-holders and diaphrams that you have mentioned in your last answer?

A. They were all left by me in the photographic car at Cambridge, as I have before stated.

Q. 22. Since that time, have you made and used any instrument like or corresponding to Exhibit M?

(Defendant's counsel objects to last question as calling for immaterial testimony.)

A. I have.

Q. 23. When?

A. I cannot now fix the time definitely, but I think it was in 1863.

24. When did you first hear that Southworth had obtained a patent for the invention in suit?

(Objected to by defendant's counsel, on the ground that it assumes what has not been stated by the witness, that he ever learned exactly what Southworth's patent was; or that he ever knew before this trial exactly what Southworth's patent was.)

A. It is impossible for me to state when.

G. W. PINE.

Subscribed and sworn to this 13th day of September, 1867.

JOHN T. LAMPORT,
United States Commissioner and Examiner
for the Northern Distict of New York.

Recess for dinner.

At two o'clock p. m. of this 13th day of September, 1867, the counsel for the respective parties were present, and defendant's counsel introduced as a witness Arthur Cobden, who, being duly sworn by the examiner, testified as follows:

154 Q. 1. What is your name, age, residence, and occupation?

A. My name is Arthur Cobden; I am thirty-five years of age; I reside in the city of Troy, N. Y.; and am a photographer by occupation.

Q. 2. How long have you been engaged in the photographic business?

A. About twenty-three years.

Q. 3. Where, and at what places, have you been so engaged in the photographic business?

A. In London, England, first; Philadelphia, in Pennsylvania; at Louisville, Kentucky; New York City, and in Troy, N. Y.; these are the principal places.

Q. 4. State with whom you were engaged in the photographic business in London, and for what period?

A. I was with J. E. Mayall, at his gallery in London, from the year 1844 to 1852.

Q. 5. Did you, when so engaged in London, as you have stated in your last answer, make photographic pictures?

A. I did.

Q. 6. Did you make, while so engaged in Mayall's gallery, in London, photographic pictures, more than one upon the same plate, with a sliding plate-holder, which was slid over the axis or field of the lens without removing either the plate or the plate-holder from the camera box?

A. I did.

Q. 7. Did you see other photographists besides yourself, at Mayall's gallery, in London, while you were there, as you have stated, make photographic pictures, more than one upon the same plate, in the manner that you have described in your last answer?

A. I did.

Q. 8. In what year was it, or during what period, did you make and see others make such pictures in London in the way you have descriced?

A. In the years 1848, 1849, and 1850.

Q. 9. Have you a model here in court of the photographic instrument by which you and other photographers made photographic pictures, more than one upon a plate, without removing the plate or plate-
155 holder from the camera box, in Mayall's gallery in London, as hereinbefore stated by you? If so, present the model to Commissioner Lamport, and explain the same, and the parts thereof particularly, and the use of each part, and the operation of the instrument with the parts in making the said photographic pictures, more than one on the same plate, as described by you as having been made at Mayall's gallery, in London, in the years 1848, 1849, and 1850?

(The plaintiff's counsel objects to the last question, and insists that the original instrument must be produced, or the want of it accounted for.

The defendant's counsel presents the model now to the commissioner for the purpose of aiding the witness in explaining the operation of the instrument, and asks the witness to state, preliminarily, if the original instrument used in London in 1848, 1849, and 1850, is now in existence, or can be obtained or produced here at the present time.)

A. I cannot say whether it is now in existence; I have it not in my possession or under my control, and therefore I cannot obtain or produce it here. I have a model of the instrument I used and saw others use in London, as I have before stated, and now produce it here, and which I desire the commissioner to mark as an exhibit. (And hereupon said model is marked and filed as Exhibit N, Schoonmaker, by the commissioner.) I describe it by saying that the camera box is marked and lettered A; the plate-holder, B; the plate, C; the focusing-glass, D; the lens, E. In operating the instrument we take the whole of it into the dark closet and insert the plate, which has been previously prepared, into the plate-holder; we then take the whole apparatus and adjust our focus; we move the focusing-glass in the slide of the camera box, and then move the plate covering the whole field of the lens, and make the first sitting or impression; we then move the plate-holder again one-half the width, and make the second impression, by placing or mov-

ing the plate over the field of the lens, squarely before it, and not on any angle.

Q. 10. Did you make in London any instrument or instruments
156 for making photographic pictures, more than one upon a plate, after the manner that you have described? If so, state how many you made, and whether or not they were made after the style and form of the Exhibit N, Schoonmaker.

A. I made one instrument in London, of which the Exhibit N, Schoonmaker, is a model.

Q. 11. Did you bring said last-mentioned instrument so made by you to America?

A. I cannot be positive whether I did or not.

Q. 12. Were photographic pictures made, more than one upon a plate, in the manner that you have described as so made in London, and sold there extensively?

A. We made all our ring pictures and small locket pictures with that instrument; they were made and sold there at that time, but not extensively.

Q. 13. What was the reputation and standing, in the photographic trade and art, of Mayall's gallery, in London, during the time you were connected with it?

A. It stood next to the head, in an English point of view; that is, it was then second in reputation in London.

Q. 14. Have you examined the specifications, drawings, and claim of the patentee, as described in Exhibit B, Wing, in this suit?

A. I have.

Q. 15. Do you understand, from your knowledge and examination of said Exhibit B, Wing, the principles of the invention, and the operation of the instrument described in that exhibit, as claimed by the patentee therein?

A. I do.

Q. 16. State how the principles and operation of your machine marked Exhibit N, Schoonmaker, in making photographic pictures, more than one upon a plate, after the manner described by you in your testimony, compare with the principles and operation of the instrument described in Exhibit B, Wing, in making photographic pictures, more than one upon a plate, as therein described?

A. The object to be gained is precisely the same; the principle is the same, but the operation is different.

Q. 17. In your last answer you state that the operation is different. Explain the difference, and where they are alike, if they are alike in any particular.

157 A. In the description of Exhibit B, Wing, the plate is worked in this wise: The plate is moved inside the holder or frame, and in Exhibit N, Schoonmaker, the holder is moved in the camera box, each movement bringing that part of the plate to be operated upon directly in front and covering the whole field of the lens. In working each of these instruments the plate is moved over the field of the lens substantially in the same way. The difference in these two machines, in their operation, is in the movement of the plate-holder and plate.

The witness, being cross-examined by the plaintiff's counsel, further testified as follows:

Q. 1. Why do you think you used the instrument you have described in the year 1848?

A. Because I recollect distinctly of doing it in 1848, 1859, and 1850, before I left London.

Q. 2. Are you sure it was not before 1848?
A. I am not; I could almost swear it was.
Q. 3. Why don't you swear it was?
A. Because I am not positive.
Q. 4. What facts enable you to fix in 1848 rather than in 1847?
A. I judge from the time I was with Mayall, before and after using it.
Q. 5. Is that all the reason you can give?
A. I can recollect of using it for four or five years before I left London. I think that ought to be sufficient.
Q. 6. Is the model Exhibit N, Schoonmaker, a faithful representation of the front of the camera box, such as you have described?
A. It is.
Q. 7. Was the slide shown in Exhibit N, Schoonmaker, open at each end in the camera box you have described?
A. It was, so that we could slide the focusing-glass out of the box as we slid the plate-holder into it.
Q. 8. The slide was at the extreme part of the box, was it, as represented in the model?
A. It was.
158 Q. 9. How was that portion of the plate not exposed to the action of the lens protected from the light while the picture was being taken?
A. It was protected by the back of the camera box.
Q. 19. This, then, required a peculiar form of camera box, did it not?
A. It did; it required a box to suit the lens.
Q. 11. It could not be used, except with a lens of any short focus, so that the plate could be placed close to the front of the box, could it?
A. Yes; it could, in any camera box now used, by using a slide such as is used in Exhibit M, Schoonmaker.
Q. 12. Without reference to the slide mentioned in your last answer, could the peculiar construction shown in Exhibit N, Schoonmaker, in which the plate is protected from the action of the light by the front of the box, be used in any but a short-focused instrument?
A. It could be used in any box.
Q. 13. What did you take the box into the dark closet for, as you have described in your direct examination?
A. To insert the plate in the holder.

ARTHUR COBDEN.

Subscribed and sworn to before me this 13th day of September, 1867.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

This examination is adjourned, by consent of counsel, to Sept. 18th, 1867, at 10 o'clock a. m., at same place.

1867, September 18, at 10 o'clock a. m., the counsel for the respective parties again appeared at the office of Messrs. Norton & Cowen, in Troy, and the counsel for defendant introduced as a witnes Eugene S. M. Haines, who, being duly sworn by the commissioner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?
A. My name is Eugene S. M. Haines; I am thirty-four years of age; I reside in the city of Albany, New York; and am a photographer by occupation.

159 Q. 2. How long have you been engaged in photographic business? State the year you commenced it, and whether you have continued in it from that time to the present.

A. I commenced it either in the fall of 1852, or the winter and spring of 1853; I think it was the winter of 1852–'3, and I have continued ever since with the exception of about one year.

Q. 3. What was your business and occupation before you entered into the photographic business?

A. I was employed as a church and hand organ builder in the city of New York, and was so employed some five or six years.

Q. 4. State the places that you were engaged in the photographic business, and with whom you were first engaged, and state what you have mainly been engaged in, and with whom you have been so engaged.

A. I was first engaged in photographic business in the city of New York, with Edward Anthony, about two years; I was then engaged in manufacturing photographic apparatus. Edward Anthony was at that time and is now the oldest house, and now does the most extensive business, in that line of any establishment in this country. He was at that time a large importer from abroad of everything pertaining to the photographic business. He was continually bringing out everything new that was made or invented in Europe, and having them, as well as inventions of his own, made at his works in New York. At that time the photographic business and the making of the apparatus connected with it, being in its infancy, mechanics suitable for making such apparatus were difficult to obtain, therefore Mr. Anthony brought me all the new and curious apparatus and models of his own and other inventions, because I was a general mechanic in wood and metals of all kinds, and I then manufactured apparatus from his description and from his models; sometimes from models Mr. Anthony had obtained from abroad, and sometimes from drawings also obtained from abroad, and other drawings and models obtained from citizens of the United States. After leaving Mr. Anthony I engaged in the making of photographic pictures, at the gallery of Marx & Le Luce, in Canal street, New York. I continued there for several months—towards a year. I then went to 14th street and 3d avenue, in New York, to give instructions to a man
160 named Horton in taking photographic pictures, where I remained several months. From there I went to No. 691 Broadway, with Geoege Morse, who was the successor of Holmes in the photographic business at that place. There I made stereoscoping a specialty and also attended to the general business of the gallery. I next came to Albany with S. J. Thompson—Samuel J. Thompson—which I think was in May, 1860. There I made photographie pictures of all kinds, and practised photography in all its branches. I remained with him about two years and eleven months.

Q. 5. State generally how the stereoscopic art or profession, in its scientific character, compares with the other branches of the art of photographing; whether it embraces a higher or lower degree of mechanical and scientific skill than the other branches of photographing.

A. It stands about the highest in the scale of art in the process of photographing.

Q. 6. Have you given much or little attention to the stereoscopic department in photographing, and in the use and manufacture of the instruments used in photographing?

A. I have given special attention to the stereoscopic department of the art from the time I first engaged in it, and particularly since the year 1858.

Q. 7. Have you studied and are you familier with the various photographic camera boxes, together with the various apparatus connected with said boxes, in making photographic pictures in the country since you first commenced with Mr. Anthony, in New York, as you have hereinbefore stated, and, also, were you acquaint with the mode of using the same in making pictures?

A. I have studied and am familiar with such boxes and apparatus, and consider myself thoroughly posted in all such inventions and apparatus.

Q. 8. Are you acquainted with the different modes now in use in this country in making photographic pictures more than one upon a plate, by means of sliding the plate and plate-holder in the camera box, without removing either the plate or the plate-holder from such camera box?

Q. I am.

A. 9. Have you examined the specifications and drawings and claim of the patentee in Exhibit B, Wing, in suit? If so, do you
161 understand the principle involved in said invention, the construction of the apparatus therein for making photographic pictures, and the mode of making such pictures with said apparatus?

A. I have examined such specifications, drawings, and claim of said exhibit, and I understand the principles involved therein, the construction of the apparatus therein described, and the mode of making pictures with it.

(The defendant's counsel here offers in evidence a camera box and apparatus connected therewith, and desires to have it marked "Exhibit O, Schoonmaker," by the examiner, and it is so marked by him.)

Q. 10. Are you familiar with the camera box and the apparatus thereto belonging, marked "Exhibit O, Schoonmaker," herein, and also with the mode of operating the same?

A. I am.

Q. 11. State how the principles of the photographic apparatus marked "O, Schoonmaker," and the mode of operating the same in making photographic pictures, compare with the principles and mode of making photographic pictures with the instrument described in Exhibit B, Wing, in suit.

A. I think it compares with it; I think the principles are the same and the same result is attained, but the mode of getting at it is somewhat different; you produce the same effect with each apparatus.

Q. 12. In the operation of the two machines referred to in the last question, are or are not photographic pictures made in each, more than one upon a plate, by moving successively several parts of the plate in the plate-holder over the field of the lens in the course of the operation?

(Plaintiff's counsel objects to the last question as leading and improper.)

A. Such pictures are made in each of said machines.

Q. 13. Explain how the field of the lens in Exhibit O, Schoonmaker, operates as compared with the field of the lens in Exhibit B, Wing, in making photographic pictures, more than one upon a plate. I refer in this question to the principles and operation of each in making photographic pictures, more than one upon a plate, as connected with the field of the lens in each.

162 A. The field of the lens in each is identical; the illuminating surface which each lens will throw on the ground glass is identical; the holder used on Exhibit B, Wing, produces the picture from the centre of the field of the lens, and in Exhibit O, Schoonmaker, the holder produces the picture on the side of the field of the lens; the pic-

tures are all taken in what is called the plane of the optical axis of the lens, which includes the whole field; they are so taken in both of the machines described.

Q. 14. Are photographic pictures made in each of said machines, Exhibit O, Schoonmaker, and Exhibit B, Wing, with equal perfection, in reference to focal accuracy?

A. They are.

Q. 15. In photographic pictures made in a group, are those pictures taken on the outer side of the group, on an angle with the lens, as perfect as the picture in said group which is taken on a straight line with the axis of the lens or exactly in front of the lens?

A. Yes; they are.

Q. 16. Explain how the light which comes through the lens on to the plate, that produces the outside pictures in a group, comes on to the plate to produce those outside pictures, as compared with the light coming through the lens upon the plate to produce the centre picture.

A. They are identical; the rays of light from two given objects, placed any certain distance apart, strike and cross each other at the lens, and then diverge again and strike the plate at given distances, in proportion to the distance of the camera from the object.

Recess for dinner.

After dinner the counsel for the respective parties appeared, and the examination of Eugene S. M. Haines was resumed by the counsel for the defendant.

Q. 17. Describe how the rays of light pass from the lens to the several parts of the plate on which the picture of a group is made? I wish to know whether the light falls as directly upon the part of the plate when the two outside pictures of the group are made, as it does upon the part of the plate when the center picture of the group is made.

163 A. The light divirges from the lens to the surface of the plate equally in all its parts. The light falls as directly from the two outside figures of the group as it does from the center figure. The light diverges from the lens to the plate just as the spokes of a wheel diverge from the hub to the tire.

Q. 18. About how long will a camera box and plate-holder, in [in] ordinary use and without any repair, last?

A. About three years, at the outside.

On being cross-examined by the counsel for the plaintiff, the witness testified as follows:

Q. 1. Have you ever been examined in a patent case as an expert before?

A. I have not.

Q. 2. Have you ever studied optics as a science, except as you have become acquainted with it in the course of your business?

A. Only in the ordinary manner, in school, never under a scientific optician.

Q. 3. What do you understand by the axis of a lens?

A. I understand by the axis of the lens the point where the rays of light from any given object cross each other; the axis of a lens is any point within the luminous circle which it throws.

Q. 4. Is the image formed by the edge of the lens when the object is placed on one side of it equally perfect in all respects with the image formed by the center of the lens when the object is in front?

A. Yes, sir; it is.

Q. 5. What causes the rays of light to converge when they pass through the lens?

A. On account of the inequality of the glass.

Q. 6. Do you mean to say that the image would be the same, no matter at what angle the light strikes the lens?

A. I do mean to say so.

Q. 7. Do you suppose that a ray of light striking the lens from an object placed directly in front passes through the same thickness of glass as a ray striking the lens diagonally from an object placed on one side?

A. Certainly. It passes through the same spot of the glass, notwithstanding the edges of the glass may be thinner than the center.

164 Q. 8. Then, in your opinion, it makes no difference as to the accuracy and perfection of the image whether it is taken through the center of the lens or through some portion of the lens farthest from the center?

A. It makes no difference in my [my] estimation.

The witness, being further examined by the defendant's counsel, testified as follows:

Re-direct Q. 1. Since you have been engaged in the photographic profession, what degree of attention have you given to optics and to authors on that subject?

A. I have studied, since I have been so engaged, the subject of optics thoroughly, and I have read and consulted all the authors on that subject within my knowledge, or that I have heard of and could get access to.

The further hearing of this matter was postponed to Sept. 19th, 1867, at 10 o'clock a. m., at same place.

EUGENE S. M. HAINES.

Subscribed and sworn to before me this 18th day of September, 1867.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

At 10 o'clock a. m., September 23, 1867, at the office of Norton & Cowen, esq's, in Troy, the counsel for the respective parties were present; and thereupon the counsel for defendant recalled Samuel J. Thompson as a witness, who, being further examined, testified as follows:

Q. 1. Look at Exhibit O, Schoonmaker, in suit, and examine it, its construction, principles involved in making pictures by it, and the mode of operation in making photographic pictures by it, and state how it compares in those particulars with the construction, principles involved in its operation, and its operation in making photographic pictures with the camera box and apparatus connected therewith, as made and used by you in 1847, and subsequently thereto, described in your testimony herein.

165 A. I have examined Exhibit O, Schoonmaker, now shown me, and it is the same precisely.

Q. 2. Describe the construction and operation of Exhibit O, Schoonmaker.

A. It is so constructed as to cut off one-half of the light from the plate while I made one picture on that end of the plate exposed, and then the plate is inserted fully into the camera box, by which the other half of the plate is exposed to the light, and thus a second picture is taken.

(The defendant's counsel here offers in evidence a plate with two pictures or impressions upon it, and, at his request, the same is marked Exhibit P, Schoonmaker, by the examiner, who filed the same this day.)

Q. 3. How did the machine or apparatus by which the pictures marked Exhibit P were made compare with Exhibit O, Schoonmaker?

A. They are the same.

Q. State how the pictures, P, Schoonmaker, compare as specimens of execution and art with such pictures made by any other machine of the present day.

A. They are the same; I can see no difference. I have made pictures the same day, and with same tube, and two different boxes, but could see no difference in the pictures as to the execution.

Q. 5. Where do you consider is the field of the lens, and what is it?

A. Wherever it will cut a sharp or distinct picture.

Q. 6. Can as perfect a picture be made when the sitter is on an angle with the lens as when sitting in front of the centre of the lens?

A. It can.

Q. 8. Do operators shut off part of the light from the lens when they wish to make a picture with more depth?

A. They do.

Q. 8. How long, with ordinary wear and tear and without repairs, will a camera box and plate-holder last?

A. Six months; or from three to six months, according to what extent and how they are used.

Q. 9. What is the standing of Eugene M. S. Haines, as a scientific man, in the photographic art?

166 (Plaintiff's counsel objects to the last question as improper and incompetent. The court is to judge from the testimony of Haines himself as to his competency as an expert.)

A. His standing is No. 1.

Q. 10. How does it affect a sitter to sit a dozen times for a dozen pictures?

A. It must affect the eyes of the person sitting who sits for a dozen pictures much more than in sitting for one or two. Sitting for pictures is tiresome.

Q. 11. Can the twelve pictures referred to in the last question be made all at once by an instrument with a dozen lenses; and, if so, will the pictures be better or more perfect when they are all taken at once, or less so?

(Plaintiff's counsel objects to the last question as entirely immaterial.)

A. They can all be taken at once, and a majority of them would be better, for a person can look better once, or at one time, than he can in looking several different times.

Q. 12. Has the mode of making photographic pictures at one sitting, by adding more lenses, been in use among photogrophers; and, if so, how long?

(Plaintiff's counsel objects to the last question as immaterial.)

A. It has been in use for eight or ten years; I cannot state the precise time.

The witness, being further cross-examined by the plaintiff's counsel, testified as follows:

Q. 1. The principle of Mr. Southworth's patent can be applied to a camera box having several lenses as well as to a box containing one lens, can it not?

A. It can.

Q. 2. Do not operators often have several sittings of the same person, in different positions, in order to choose the best?

A. It is customary.

Q. 3. When and where did you first have anything to do with the photographic business?

A. I started in 1847 in Douw's Buildings, at the foot of State street, Albany. I commenced business for myself at that time, with a partner. S. D. Humphrey was my partner.

167 Q. 4. When did you first make pictures with the camera box referred to in your direct examination?

A. In the fall of 1847; I had not been in the business six weeks when I began to make pictures, two on a plate.

Q. 5. How are you able to fix the time in the fall of 1847? Do you rely entirely on your memory?

A. I do not rely on my memory alone. I was married before that time, and had a daughter born that year, and I quit the carpenter business that fall and entered the picture business; my daughter is now living; my father died the spring after, which is another circumstance aiding my memory.

Q. 6. At this length of time, what enables you to fix with exactness, not only the time you went into business, but the time you first used the camera box, to which you have referred?

A. I saw pictures at that time at Meade's gallery, two on a plate, and being desirous of getting all the information I could, I employed Cook to instruct me how to make such pictures, and I then paid him for such instruction; he showed me how to fix the box for taking such pictures; he then had a gallery in Albany.

Q. 7. Could not all of these occurrences have taken place since 1847?

A. They could not, as it was the first fall I was in business. I remained in Douw's Buildings from September, 1847, to the next May, but my partner, Humphrey, left there soon after I went there.

Q. 8. Are you able to swear that Cook showed you how to make this box between the first of September, 1847, and first of January, 1848?

A. Yes, he did; and before the spring of 1848, too.

Q. 9. How can you tell that he showed you in the fall of 1847, rather than in the spring of 1848?

A. I can tell by the fact that Humphrey, my partner, went away in the fall, soon after I went there, leaving his wife to assist me in the business, and he didn't return until the next spring, when he took the business away from me, and Cook showed me while Humphrey was absent, and assisted me from time to time, when I was in trouble in the business. These things are perfectly fresh in my memory.

168 Q. 10. What was the date of Humphrey's departure?

A. I went into the business about the first of September, and Humphrey left about a week after that.

Q. 11. What day did he return?

A. I could not state the day, but it was along in the latter part of April, 1848.

Q. 12. What kind of pictures did you take by this process?

A. Daugerrotypes, and pictures on isingglass, or on mica and metalic plates.

Q. 13. What chemicals did you then use to make the glass pictures?

A. Iodides and bromides, and we also used collodeon, made in a different way from that now used.

S. J. THOMPSON.

Subscribed and sworn to this 23d day of September, 1867.

JOHN T. LAMPORT,
United States Commissioner, and Examiner for the Northern District of New York.

And therefore this matter was further adjourned, by consent of counsel, to Sept. 30th, 1867, at 10 o'clock a. m., at same place.

At 10 o'clock a. m., of this, 30th day of September, 1867, at the office of Messrs. Norton & Cowen, in the city of Troy, the counsel for the respective parties again appeared before the examiner, and the counsel for the defendant introduced as a witness the defendant Christopher C. Schoonmaker, who, being duly sworn by the examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Christopher Schoonmaker; I am thirty-seven years of age; I reside at the city of Troy, N. Y.; and have been a photographer since the year 1846, until the first day of April last, when I went out of business.

Q. 2. Are you familiar with the different kinds of machines in use in the country for making photographic pictures?

A. I am.

Q. 3. Do you understand the manner and mode of making photographic pictures with what is claimed in suit to be Southworth's patent plate-holder, or frame? If so, describe it.

169 (Plaintiff's counsel objects to the last question. The specification of the patent is the best evidence of the mode of taking pictures by that instrument, and it has already been described by different witnesses.)

A. I do understand it. The frame is an ordinary frame, which is usually attached to the rear of the camera box, with an aperture in the center of the front of the frame. Inside of the frame, in the rear of it, is a smaller frame, which the patentee calls a plate-holder. This plate-holder is moved in said frame over the aperture and field of the lens, and thereby making a succession of pictures on one plate.

Q. 4. Have you a model which represents your understanding of the Southworth patent?

A. I have, and here produced it, and requested it to be marked as an exhibit in this suit.

(The model is here filed and marked as Exhibit Q, Schoonmaker, by the examiner.)

Q. 5. What, as you understand it, is Mr. Southworth's claim as set forth in his reissued patent?

(Plaintiff's counsel objects to the last question, that it calls for a conclusion of law, that the construction of the claim of the patent is a question for the court.)

A. It is the bringing of the different parts of one plate, or several smaller plates, into the field of the lens, and making a succession of pictures on one plate or several small plates, without taking the plate-holder from the camera box or frame.

Q. 6. Have you examined thoroughly this patent, and have you been familiar with the principle and operations of what is claimed by the Southworth patent; and, if so, how long have you been familiar with such principles and operations?

A. I have examined it and am familiar with its principles and operations, and have been familiar with that principle of making pictures

claimed by the Southworth patent from fifteen to seventeen years past, and also with the operations of such principles.

Q. 7. Do you understand what is meant by the Southworth claim in his patent where he says in substance he claims the means of bring-
170 ing different parts of a single plate, or one or more smaller plates, into the field of the lens, and thereby making more than one picture on a plate, without taking the plate-holder from the camera box?

A. I do.

Q. 8. Did you hear the testimony of Samuel J. Thompson herein, in reference to the sliding plate-holder and the apparatus connected therewith, that he used in 1847?

A. I did.

Q. 9. Did Mr. Thompson, named in the last question, explain to you the mode of making pictures by said sliding plate-holder and the apparatus connected therewith, as used by him in 1847, or did he give you the secret of making such pictures with a sliding plate-holder where he made more than one picture on one plate without taking the plate-holder from the camera box; if so, when was it that he so explained it, and gave you the secret?

(Plaintiff's counsel objects to the last question) first, as leading; second, calling for heresay testimony; third, incompetent and immaterial.)

A. He did so explain to me the mode of taking such pictures in the winter of 1848–'9.

Q. 10. State whether you saw Mr. Thompson make such pictures in the way you have described and referred to in your last two answers; and, if so, state when and where it was.

A. I did see him make such pictures in the city of Albany, in the winter of 1848–'9.

Q. 11. State how the principles and operation involved in the use of the plate-holder you saw Mr. Thompson use in making photographic pictures, more than one upon a plate, referred to in your last answers, compare with the principles and operation of the [of the] Southworth patent in making such pictures.

A. I think they are identically the same.

Q. 12. What are those principles?

A. They consist of bringing the different parts of the plate within the field of the lens, thereby making a succession of pictures on one plate, without taking the plate-holder from the camera box.

Q. 13. Where is the field of the lens?

171 A. Wher[upon]*ever* you can make a clear, distinct, and well-defined picture without distortion; or where[on]*ver* you can focus a clear, distinct, and well-defined picture free from distortion.

Q. 14. State whether this can be done with the instrument marked Exhibit O, Schoonmaker; and, if so, whether it can be well done.

A. It can be done, and well done, by the instrument represented by that exhibit.

Recess for dinner.

Q. 15. State whether Exhibit P, Schoonmaker, is a specimen picture made with Exhibit O, Schoonmaker.

A. Exhibit P, Schoonmaker, was made with an instrument exactly like Exhibit O, Schoonmaker; only it was one size larger.

Q. 16. How does the picture Exhibit P, Schoonmaker, compare as a specimen of art and skill with pictures made at the present time?

A. It will compare favorably with the best of work made at the present time.

Q. 17. State whether you consider the Southworth invention in suit embraces simple or intricate principles in its use and operation.

A. I should think the operation of the plate-holder is very simple.

Q. 18. State whether or not you saw Samuel J. Thompson work the sliding plate-holder in a groove in the camera box over the field of the lens, and make a succession of pictures without taking the plate-holder from the camera box. If so, state in what year, and where you first saw him do it.

A. I did see him make pictures by that process at the city of Albany in the winter of 1848–'9; on the same occasions to which I have referred in my former answers.

Q. 19. State whether said last-mentioned plate-holder, with the instruments connected with it, used by Mr. Thompson, as referred to in your last answer, made more than one picture on a plate without taking it from the camera box, by sliding the plate-holder over the field of the lens.

A. It did.

172 Q. 20. Was there at that time any other known way of making pictures, two or more on one plate, but by sliding the plate-holder into the field of the lens?

A. Not that I know of.

Q. 21. Who did you succeed in business at Albany in 1850?

A. I succeeded Messrs. Meade Brothers.

Q. 22. State whether or not you then purchased of Meade Brothers all their apparatus for making pictures, and also their different processes for making the same.

A. I did.

Q. 23. What kind of plate-holders and frames did you find among said apparatus?

A. I found one of which the plate-holder and frame I now hold in my hand is a substantial model, and I offer it as an exhibit in this suit.

(Such model is here filed and marked Exhibit R, Schoonmaker, by the examiner.)

Q. 24. Describe how Exhibit R, Schoonmaker, is worked or operated in making pictures.

A. No. 1 of such exhibit is the frame which is attached to the rear of the camera box; No. 2 is the plate-holder; in No. 1 there is an aperture in the centre, directly in rear of the lens; No. 2 is made to slide over this aperture, and make five pictures on one plate without taking the plate-holder from the frame; the different colored lines on the back of No. 1 indicate the different moves to be made with the plate-holder No. 2, in order to get the required number of pictures on a plate that you may wish.

Q. 25. How does Exhibit R, Schoonmaker, compare in principle with Southworth's patent, both in construction and operation, in making pictures?

A. They are a little different in construction, but in principle they are the same.

Q. 26. State whether you saw pictures that were made at Meade Brothers in Albany, two or more on a plate, before you purchased their photographic establishment, as hereinbefore stated by you.

(Plaintiff's counsel objects to the last question as leading and immaterial.)

A. I did so.

173 Q. 27. How long before?

A. Three or four years.

claimed by the Southworth patent from fifteen to seventeen years past, and also with the operations of such principles.

Q. 7. Do you understand what is meant by the Southworth claim in his patent where he says in substance he claims the means of bring-
170 ing different parts of a single plate, or one or more smaller plates, into the field of the lens, and thereby making more than one picture on a plate, without taking the plate-holder from the camera box?

A. I do.

Q. 8. Did you hear the testimony of Samuel J. Thompson herein, in reference to the sliding plate-holder and the apparatus connected therewith, that he used in 1847?

A. I did.

Q. 9. Did Mr. Thompson, named in the last question, explain to you the mode of making pictures by said sliding plate-holder and the apparatus connected therewith, as used by him in 1847, or did he give you the secret of making such pictures with a sliding plate-holder where he made more than one picture on one plate without taking the plate-holder from the camera box; if so, when was it that he so explained it, and gave you the secret?

(Plaintiff's counsel objects to the last question) first, as leading; second, calling for heresay testimony; third, incompetent and immaterial.)

A. He did so explain to me the mode of taking such pictures in the winter of 1848–'9.

Q. 10. State whether you saw Mr. Thompson make such pictures in the way you have described and referred to in your last two answers; and, if so, state when and where it was.

A. I did see him make such pictures in the city of Albany, in the winter of 1848–'9.

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Recess for dinner.

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A. I did see him make pictures by that process at the city of Albany in the winter of 1848–'9; on the same occasions to which I have referred in my former answers.

Q. 19. State whether said last-mentioned plate-holder, with the instruments connected with it, used by Mr. Thompson, as referred to in your last answer, made more than one picture on a plate without taking it from the camera box, by sliding the plate-holder over the field of the lens.

A. It did.

172 Q. 20. Was there at that time any other known way of making pictures, two or more on one plate, but by sliding the plate-holder into the field of the lens?

A. Not that I know of.

Q. 21. Who did you succeed in business at Albany in 1850?

A. I succeeded Messrs. Meade Brothers.

Q. 22. State whether or not you then purchased of Meade Brothers all their apparatus for making pictures, and also their different processes for making the same.

A. I did.

Q. 23. What kind of plate-holders and frames did you find among said apparatus?

A. I found one of which the plate-holder and frame I now hold in my hand is a substantial model, and I offer it as an exhibit in this suit.

(Such model is here filed and marked Exhibit R, Schoonmaker, by the examiner.)

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Q. 25. How does Exhibit R, Schoonmaker, compare in principle with Southworth's patent, both in construction and operation, in making pictures?

A. They are a little different in construction, but in principle they are the same.

Q. 26. State whether you saw pictures that were made at Meade Brothers in Albany, two or more on a plate, before you purchased their photographic establishment, as hereinbefore stated by you.

(Plaintiff's counsel objects to the last question as leading and immaterial.)

A. I did so.

173 Q. 27. How long before?

A. Three or four years.

Q. 28. State whether the principle and operation of making two or more pictures on a plate without taking the plate-holder or plate from the camera box was known among photographers at or before the time you first saw said pictures referred to in your last answer.

(Plaintiff's counsel objects to the last question as leading, as immaterial, and also that it is unnecessary and absurd to have the witness swear to a certain fact and then to a legal conclusion from that fact.)

A. I judge the principle was known, from the fact that the Messrs. Meade explained the mode of making pictures in that way to me.

Q. 29. State how early, in connection with your purchasing out the Meade Brothers, they explained said mode of making photographic pictures; whether it was before you made said purchase, and, if so, how many years before?

A. It was in 1848, I think; it may have been as early as 1847.

Q. 30. How long, with ordinary use, will a plate-holder and camera box last without repair?

A. My experience would say four or five years at the outside.

Q. 31. Did you know anything about the Southworth alleged discovery or invention at the time you succeeded Meade Brothers?

A. I did not.

Q. 32. How long after did you hear of this alleged invention?

A. I think it was somewhere in the neighborhood of ten or twelve years.

33. What has become of Meade Brothers?

A. I suppose they are dead; I have been so informed.

Q. 34. State whether, soon after you succeeded Meade Brothers, you made pictures with sliding-holder and sold them then.

A. I did so.

Q. 35. State after what manner and with what instrument you made those pictures.

A. I made them with an instrument and after the manner as described in Exhibit R, Schoonmaker.

A. 36. State whether you had a partner in 1850.

Q. I had.

174 Q. 37. State whether you had assistants at that time in your work in making said pictures.

A. At that time we did all our work ourselves.

Q. 38. What has become of your said partner?

A. I have not heard anything of him in six or seven years, and he is reported dead.

Q. 39. When there became a great call for what is known as card-photographs, state whether not you used the sliding plate-holder for making them.

A. I did not; I substituted a number of lenses to make the number of pictures I wanted upon a plate, and I used that instrument six or seven years.

Q. 40. State whether more pictures can be made by adding more lenses, with greater ease and better, than by sliding the plate-holder before a single lens, to make the pictures required.

(Plaintiff's counsel objects to the last question as leading and immaterial.)

A. They can.

Q. 41. Have you heard the testimony, for the plaintiff, of Charles G. Hill in this case?

A. I have.

The further examination of this witness is adjourned to Monday, the 7th day of October, 1867, at 10 o'clock a. m., at the same place, by consent of counsel for both parties.

This matter is further postponed to October 7th, 1867, at 3 p. m., at same place, by consent of parties.

1867, OCTOBER 7, 3 P. M.

The parties then appeared by their respective counsel, and the direct examination of the defendant Schoonmaker, as a witness, was resumed.

Q. 42. How long did Charles G. Hill work for you?

A. He worked for me from the fall of 1864 to the fall of 1865, and again from the spring of 1866 to the spring of 1867; as a partner during the last period, he receiving a certain share of the profits.

Q. 43. State whether you and said Hill had any difficulty in settling up your business.

175 (Plaintiff's counsel objects to the last question as immaterial and incompetent.)

A. We had, several times.

Q. 44. State whether said Hill, in relation to such difficulty, threatened you; and, if so, what did he say?

(Objected to, the same as last above.)

A. He did threaten me at various times, and said he had a turn on me that he would bring me up with some of these days, and several expressions of like character.

Q. 45. How near did Mr. Hill, in his direct examination herein, get to the fact when he stated in substance that you, when he worked for you, took for small gem work, made with a sliding plate-holder, from $150 to $200 per week?

A. I think he got nowhere near the fact. My receipts for that kind of work were about $50 per week, instead of from $150 to $200.

Q. 46. Did you keep a regular set of books?

A. I did not. I kept what I call a register, simply to keep the number of negatives, so that I could find them readily when I wished to refer to them again, and it also answered as a sort of tally to keep the clerks honest.

Q. 47. Have you examined that register since the testimony of Hill herein?

A. I have.

Q. 48. What was the result of that examination?

A. I examined at several different periods with a view to arrive at [at] a correct result, not having time to examine the whole. In three weeks in January and February in 1865, I made 29 dozen cards and (5) five dozen gems; from the 1st to the 15th of March of same year, I made 38 dozen card-photographs and 10 dozen gems; from the 1st to the 15th of May following, I made 24 dozen card-photographs and 12 dozen gems; from the 15th to the 31st of July following, I made 34 1-2 dozen card-photographs and 21 dozen gems; from the 1st to the middle of December, 1865, I made 11 1-2 dozen cards and 8 1-2 dozen gems. A part of the time we sold the cards at $1 50 per dozen, and a part of the time at $2 00; and the gems at 75 cents per dozen.

176 Q. 49. At the time you made those small cheap pictures with a sliding plate-holder, with the amount of hired help you were obliged to keep to do the work, was there any profit in them?

(Plaintiff's counsel objects to the last question as immaterial, and because it is a question of law.)

A. I think not.

Q. 50. What kind of a plate-holder did you use in making card-photographs and gem pictures during the time that Charles G. Hill, the witness herein, worked for you?

A. For making card-photographs, I used a plate-holder with a camera box and two lenses, which made one simple move before the two said lenses making four pictures on one plate; for making gems, I used an instrument with four lenses, which made four moves, and thus making sixteen on a plate.

Q. 51. State whether you ever used a plate-holder made according to the specifications of Southworth's patent.

A. I did not.

Q. 52. State whether or not you ever purchased a camera box and sliding plate-holder for making more than one picture on a plate, without taking the plate-holder or plate from the box and state when it was as near as you can recollect, and of whom.

A. I did purchase such a camera box and plate-holder in 1864, in the early part of that year, of Seth E. Parsons, of Albany, who has been a witness in this case.

Q. 53. State how said box and apparatus, so purchased of said Parsons, compared with the box and apparatus said Parsons testified herein, that he was authorized by the complainant to make or sell.

A. It was the same thing.

(The defendant's counsel here offers in evidence a printed circular of the plaintiff, and which the examiner here files and marks by request, Exhibit Z, Schoonmaker.)

Q. 54. State whether Exhibit Z, Schoonmaker, is a copy of circulars that the plaintiff distributed among photographers in this section of country; and, if so, when did he first circulate them to your knowledge?

177 A. It is a copy of plaintiff's circulars, and I found them distributed at the different photographic and stock-dealers' establishments in the years 1864 and 1865.

This matter is further adjourned, by consent of counsel, to the 30th October, 1867, at 10 o'clock a. m., at the same place.

1867, October 30, 10 o'clock a. m., parties appeared, by their respective counsel, and the further taking of testimony in this case is again adjourned, by consent, to Dec. 10, 1867, at 10 o'clock a. m., at the same place.

1867, Dec. 10, at 10 o'clock a. m., the parties, by their respective counsel, and in person, appeared at the office of Messrs. Norton & Cowen, in Troy, and the further hearing and taking of testimony in this action was adjourned to the 29th day of February, 1868, at 10 o'clock a. m., at the same place.

1868, Feb. 29, at 10 o'clock a. m., the said parties, by their said counsel, again appeared at the place aforesaid, and thereupon the last witness, Christopher C. Schoonmaker, defendant, being again called, was cross-examined by the plaintiff's counsel as follows:

Q. 1. In your answer to the ninth direct interrogatory you say that Samuel J. Thompson, of Albany, explained to you his mode of making more than one picture upon a plate. Was that the first time your attention was called to this mode of taking pictures?

A. I think not. I think that Messrs. Mead Brothers had previously called my attention to it. They were then photographers at Albany.

Q. 2. When did Messrs. Meade Brothers call your attention to this subject?

A. It was in the same year, in 1847 or 1848; I think, on reflection, it was in the year 1847.

Q. 3. What makes you think it was in the year 1847? How do you fix the time?

A. I fix the time by knowing it was before I saw Mr. Thompson make two pictures on a plate.

Q. 4. How do you know the time that Thompson explained the mode of making pictures to you was in 1848 or 1849?

A. I recollect distinctly where I was at work at that time in making pictures; I was at work at that time at Potter's Hollow, Albany
178 County, and was visiting the city of Albany for eight or ten days in the winter during that time; I staid at Potter's Hollow at that time from six to eight weeks.

Q. 5. You were traveling at that time from place to place, were you, and staying a short time at each place?

A. I was.

Q. 6. Did you not visit the city of Albany frequently while you were so traveling about?

A. Not oftener than once in two or three months, and sometimes not more than once in six months.

Q. 7. Were you more than once at Potter's Hollow?

A. I was engaged there but once.

Q. 8. Where did you first engage in business at Albany?

A. In State street, in that city.

Q. 9. Were you there any length of time before you bought out Mead Brothers?

A. I commenced business there in the month of July, 1849, and continued there until the fall of 1850, when I purchased of Messrs. Mead Brothers; this I know positively, as I have examined my books, kept at that time, which show it.

Q. 10. Where did you obtain the box marked Exhibit O, Schoonmaker?

A. I purchased it of some photograph-material dealer, but the name of the particular person I am unable to state.

Q. 11. When did you purchase it?

A. Some 12 or 13 years ago.

Q. 12. Did it contain, when you purchased it, the arrangement for making more than one picture on a plate?

A. It did not.

Q. 13. Who added that arrangement, and when?

A. It was added by myself and Mr. Parsons, of Albany, last summer, as a model of what Mr. Thompson used in 1847, and for the purpose of being used in this case; I mean Samuel J. Thompson.

Q. 14. Where did you obtain the plate-holder and diaphram marked Exhibit R, Schoonmaker?

179 A. I found it among a lot of plate-holders at my establishment in Troy.

Q. 15. Where did it come from?

A. I do not know who made it, or where it came from originally.

Q. 16. Do you recollect when you first saw it?

A. I do not.

Q. 17. You say that a similar apparatus was found at the establish-

ment of Mead Brothers when you purchased of them; do you know what has become of such apparatus?

A. I do not; the gallery has been discontinued, and I believe the old traps and apparatus were sold at auction.

Q. 18. Can you produce any apparatus actually used by you, or by any other person, to your knowledge, prior to the year 1855, for the purpose of making more than one picture on a plate, without removing the plate from the camera-box?

A. I cannot produce any that I have used myself, or that any other person has used, to my personal knowledge; but I have information, by affidavit of others, that I can produce such apparatus that was used as early as 1851 or 1852.

Q. 19. Can you produce any pictures made by yourself, or by any other person, to your own knowledge, prior to the year 1855, which were made more than one on a plate, without removing the plate from the box?

A. I cannot.

CHRISTOPHER C. SCHOONMAKER.

Subscribed and sworn to before me this 29th day of February, 1867.

JOHN T. LAMPORT,

U. S. Commissioner and Examiner for the Northern District.

Hearing further adjourned, by consent of counsel, to Thursday, the 19th day of March next, at 10 o'clock a. m., at the same place.

March 19, 1863, at 10 o'clock a. m., the parties, by their respective counsel, appeared at the office of Norton & Cowen, in Troy, and thereupon the defendant introduced as a witness August Semmendinger, who, being duly sworn by the examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is August Semmendinger; I am forty-eight years of age; I reside in the city of New York; my place of business is
180 at No. 144 and 146 Elizabeth street, in that city; and my business is making camera boxes to the photographic apparatus.

Q. 2. How long have you been engaged in making camera boxes to the photographic apparatus, and where?

A. I have been engaged about fourteen years in that business in the city of New York.

Q. 3. While you have been manufacturing photographic apparatus, as stated in your last answer, have you become acquainted with the various photographic apparatus in use among photographers in the city of New York?

A. I have been acquainted with some of them.

Q. 4. Have you sold the photographic apparatus manufactured by you during the time you have been engaged in that business, as you have stated?

A. For the past eight years I have sold on my own account the photographic apparatus made by me, as I have been established and carried on the business for myself since January, 1860.

Q. 5. Did you ever obtain a patent for camera boxes and the apparatus connected herewith?

A. I did.

Q. 6. Is the document now shown you the patent you obtained as you have stated?

A. It is.

(Letters-patent here offered in evidence by defendant, for improvement in photographic cameras, granted to witness, and dated Feb'y 21, 1860, and No. 27241.

The counsel for the plaintiff objects to the introduction of said patent as wholly immaterial, being granted some five years after the date of patent in suit.

Said letters-patent are here marked Exhibit S, Schoonmaker, of this date. The original letters-patent, now exhibited before examiner, not being under the control of defendant, it is consented that a certified copy of same may be substituted as evidence herein.)

Q. 7. Will you describe the different parts of the apparatus you got patented, and how it operates in making pictures more than one on a plate?

A. I here exhibit to examiner a camera box and apparatus connected therewith, made and used under my said patent. It is lettered.

181 Letter A represents a spring-board to hold the plate-holder against the camera box, and indicates also the different moves of the plate to make the number of pictures required; letter B represents the glass or plate-holder; C represents the light-diminishing board or diaphram containing the apertures for the pictures; D represents the camera box itself; letters E and N represents a tongue and groove, the groove in letter B and the tongue in letter C. This tongue and groove are used for the purpose of sliding the plate-holder over the axis of the lens to make any number of pictures required. With the apparatus now shown I make twelve pictures on one plate, and make six of them on the same plate without removing the plate-holder from the camera box, but by sliding it successively over the field of the lens. The twelve pictures now contained in the plate-holder shown were made by me in the manner I have described by the apparatus and camera box here produced, and which is now here, marked Exhibit T, Schoonmaker, by the examiner.

AUGUST SEMMENDINGIR.

Subscribed and sworn to before me this 28th day of March, 1868.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

The further hearing of this matter was then postponed, by consent of counsel for the respective parties, to the second day of April, 1868, at 10 o'clock a. m., at same place.

1868, April 2d, at 10 o'clock a. m., at the office of Norton & Cowen, in the city of Troy, the parties, by their respective counsel, again appeared, pursuant to adjournment, and thereupon the defendant introduced as a witness Henry S. Lewis, who, being duly sworn by the examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Henry J. Lewis; I am in my fiftieth year of age; I reside at Greenpoint, Kings County, N. Y.; I am a manufacturer of photographic apparatus.

Q. 2. How long have you been so engaged, and where?

A. Including dauguerrean, ambrotype, and photographic apparatus, I have been engaged in the manufacture of such apparatus for sale for the past twenty-five years, for the most of this period in the city of New York, and the residue at Williamsburg and Greenpoint.

182 Q. 3. During the last-named period have you been acquainted with the photographic, daguerreotype, and ambrotype apparatus used by that profession in and about the cities of New York and Brooklyn?

A. I have, and as generally used in this country.

Q. 4. Did you know of Isaac Van Bunschoten and John J. Woodbridge and William E. Mann obtaining a patent for a photographic instrument somewhere about April 17th, 1849?

A. I understood that they obtained such a patent about that time, and so learned it from the Patent Office Reports, and I was engaged in getting up a camera box according to their improvement.

Q. 5. Was the camera box and apparatus connected therewith, referred to in your last answer, a model for said patent?

A. It was not; it was an actual working camera of full size; it was made according to the description contained in their patent; it was an experimental machine, made for the purpose of testing said patent or invention.

(The counsel for defendant here offers in evidence a certified copy of letters-patent granted to Isaac Van Bunschoten, joint inventor with and assignee of S. G. Woodbridge and W. Mann, dated April 17th, 1849, and numbered 6357—and which is here received and marked as Exhibit [T] *U*, Schoonmaker, by the examiner.

Plaintiff's counsel objects to the introduction of this exhibit as immaterial.

The defendant's counsel also offers in evidence a camera box and apparatus connected therewith, including the pictures now contained therein, which are here received, filed, and marked by the examiner Exhibit V, Schoonmaker.

Plaintiff's counsel objects to the introduction of last exhibit as immaterial.)

Q. 6. Did you manufacture the box marked Exhibit V, and the apparatus connected therewith for making photographic pictures?

A. I did.

Q. 7. How does the machine or box marked Exhibit V, and the apparatus connected therewith, compare with the box and apparatus that you have stated in one of your previous answers you made to test the invention of said Isaac Van Bunschoten and others, referred to by you?

183 A. It contains the same principles, and is made on the same plan, and operates in the same way when used.

Q. 8. When, as near as you can state, did you make said box, and the apparatus connected therewith, for Isaac Van Bunschoten and others? and state whether it was before the issuing of their patent spoken of by you.

A. As near as I can fix it in my memory, it was in the year 1847; it may possibly have been as late as the year 1848, but not later, and it was before the issuing of said patent.

Q. 9. Are you acquainted with the patent known as the A. S. Southworth patent, referred to in this case, and marked Exhibit A, Wing, and the reissue thereof, also referred to in this case, and marked Exhibit B, Wing, and now shown you; and also the claim and the principles and operation involved in them for making photographic pictures?

A. I am.

Q. 10. Are you acquainted with the principles and operation in making photographic pictures according to and with the box and apparatus marked Exhibit V herein?

A. I am.

Q. 11. Look at the photographic pictures now in the plate-holder, making a part of the apparatus marked Exhibit V herein, and state whether you made them; and, if yea, when did you make them?

A. I did make those pictures; I made them this morning.

Q. 12. Describe how they were made and the manner of making photographic pictures spoken of in your last answer in the camera box marked Exhibit V. State how many pictures there are, and whether they are all upon the same plate, and whether or not they were made without taking the plate-holder or plate from the camera box while they were being made.

A. They were made by passing the plate-holder and plate in the slide on the back of the camera box, so as to move a portion of the plate over the field of the lens, and allowing it to remain long enough for the light to act upon it; then moving another portion of the plate in succession over the same field of the lens, and letting it remain the required time to produce a second or subsequent impression; and then moving again another portion of said plate in the same manner as before, thus
184 producing the three impressions on this same plate; there are three pictures on one plate, and they were all made without removing the plate-holder or plate from the camera box while they were being made; they were all made by sliding different parts of the plate before the field of the lens, or in the field of the lens, which I understand to be the same.

Q. 13. How does the principle and operation in making this picture, described in your last answer, compare with the principle and operation in making photographic pictures or impressions described in and claimed by the Southworth patent and the reissue thereof, marked herein as Exhibits A and B, Wing?

A. The patent marked A, Wing, contains merely a mechanical contrivance; the principle and operation of the reissued patent marked B, Wing, and the principle and operation of the exhibit marked V, Schoonmaker, are the same in the making of photographic pictures, more than one upon a plate.

Recess till 2½ o'clock p. m.

2½ O'CLOCK P. M.

The direct examination of the witness, Henry J. Lewis, being concluded, he further testified, on his cross-examination by the plaintiff's counsel, as follows:

Q. 1. Have you read Southworth's reissued patent, and the patent of Isaac Van Bunschoten and others?

A. I have.

Q. 2. Did you ever see a machine made and operated under Southworth's patent?

A. I have.

Q. 3. When did you make Exhibit V?

A. It was made within the last few days for the defendant, by his orders, and took the pictures now in the plate-holder, of which I have spoken, at his request.

Q. 4. What has become of the machine you made for Van Bunschoten and others?

A. I cannot say; I made and delivered it to Mr. Woodbridge, one of the patentees.

Q. 5. Did you take any pictures with it?

A. I did not.

185 Q. 6. You say that the principles and operation of Exhibit V, and the box described in Southworth's patent, are similar. Do you mean anything more by that than that in both machines the plate is moved over the field of the lens?

A. I mean that the two contain the same principle of moving the plate over the field of the lens, for the purpose of making any number of pictures upon a plate, according to the number of stoppages and the different part of the plate exposed for a sufficient time; they are similar in construction, and both have the same face; and the slides are the same; and the same mode of cutting off the light, so as to reduce or increase the portion of the plate exposed to the light at the same time. The other parts of the camera are such as are used in the construction of other boxes, and are immaterial.

Q. 7. Do you mean to say that these two machines, the machine of Southworth and the one of Van Bunschoten and others, were intended by their inventors to produce the same effect, as shown by the said patents?

A. The machine of Van Bunschoten was intended to make a picture upon a portion of the plate as exposed to the action of the light through the lens, and the moving another portion of the same plate for the same purpose, and so continuously upon any portions of the plate that the operator might desire to make a picture upon; such number being limited only by the length of the frame and the size of the plate used for making said pictures. I understand the reissue of the Southworth patent, Exhibit B, Wing, to claim the making of a picture by moving a plate over the field of the lens, for the purpose of making any number of pictures upon the same plate, on the same principle and by the same means.

Q. 8. The Southworth machine, as you understand it, is intended to be used for the purpose of taking several pictures of the same object upon a single plate, is it not?

A. I do not so understand it.

Q. 9. What was the machine which you say you have seen operated used for?

A. The Southworth machine I have seen operated was used for taking duplicate pictures, or for duplicating pictures.

186 Q. 10. Was the machine of which Exhibit V is a copy intended to be used for taking an entire object at once, or for taking portions of an object at different times?

A. It was intended for both purposes.

Q. 11. Is there anything said in Van Bunschoten's patent about taking an entire object at once?

A. I think there is.

Q. 12. Is there anything said about taking duplicate pictures of the same object?

A. I think not. The claim says that a picture may be made upon a portion of the plate, and then moved so that another picture may be made upon another portion of the same plate; it may be of the object, or of a different one.

(The counsel objects to all that portion of the last answer, after the words in the commencement, "I think not," as not responsive, and as stating the language of the claim incorrectly.)

Q. 13. From your examination of the patent marked Exhibit U Schoonmaker, and your knowledge of the machine of which Exhibit V is a copy, do you not understand that the object of the invention was to

take an entire figure, building, or view in successive parts or sections, and to correctly match those sections?

(The defendant's counsel objects to the last question on the ground of its asking for the intent of the inventor in patent Exhibit U, instead of asking for the principles and operation covered by the said invention; that the intent of the inventor is only to be ascertained by the specifications and claim of the patentee, and said specification and claim are the best evidence, and the only competent evidence, of the intent of the patentee, provided that such intent is material, which the counsel for the defendant here denies, claiming that it is only competent to prove the principles and operation of the machine and apparatus covered by the said patent; second, that the question calls for immaterial evidence.)

A. While the patentee makes no claim for any other purpose, I do not understand that he is confined to that claim alone.

Q. 14. This machine, of which Exhibit V is a copy, was intended for the use of a number of cameras, or for a single camera moved up and down the standards, was it not?

187 A. The standards are used for a double purpose, one purpose being to form a camera stand, when the camera remains in one position horizontally; and another purpose, of allowing room for raising or lowering the camera to any required heighth; and beyond that, the specification shows other uses to which it might be applied. As I understand the invention, it contemplates the use of it in a perpendicular as well as in a horizontal position.

Q. 15. You described in your direct examination the mode in which you took the three pictures, now contained in the plate-holder of Exhibit V. Is there any such operation as that described in the specifications of that patent?

A. The specifications cover a number of pages. I took those pictures according to the principles covered by the claim of such patent.

Q. 16. Is there any description in the specifications of taking successive pictures by moving the plate without moving the camera box, and without using more than one box?

(Defendant's counsel objects to the last question as calling for what the patent, specifications, and claim, one and all, contains; and that the best evidence of it is the paper itself; second, as immaterial.)

A. I don't think that there is any such manner specified; such is my impression.

Q. 17. The mode of operation of Exhibit V, when more than one camera was used, consisted in sliding the plate over the lens of each camera successively, did it not?

A. I know nothing of that operation, except from the specifications, as the camera box made by me for the patentees did not comprehend that operation.

Q. 18. Judging from the specification, was not that the mode of operation?

A. It was.

Q. 19. When only one camera was used, the mode of operation was to take a certain portion of the whole picture, slide the camera box to a new position, then slide the plate so as to expose another portion to the action of the lens, and take another portion of the picture, was it not?

188 A. The specification contemplates when the operator wishes to take a high building, the changing of the position of the camera, so as to take different portions of the building when used for that purpose.

Q. 20. Is not that the only mode of operation described in the specification, where only one camera is used?

(Counsel for defendant objects to the last question because it calls for the memory of the witness as to what the specifications contain, whereas the specifications are themselves the best evidence of what they contain.)

A. I think the specification comprehends the use of the camera with a slide, placed horizontally so as to slide the plate parallel with the horizon of the pictures, moving it over the field of the lens.

Q. The pictures taken in Exhibit V must be taken successively along the length of the plate, must they not? There is no provision made for moving the width of the plate over the lens?

A. There is but one motion provided for.

Q. 22. It differs in that respect from Southworth's machine, does it not?

A. Not always; as in some of Southworth's machines only one motion is provided for.

Q. 23. Does not the specification of Southworth's patent describe the plate-holder as moving both vertically and horizontally?

(Defendant's counsel objects to the last question, as calling for the witness' memory, whereas the specification itself is the best evidence of what it contains.)

A. The specification describes, but does not claim, two motions.

Q. 24. In Southworth's patent there is a partition between the plate-holder and the lens, with an aperture in the centre of a size corresponding with the size of the picture to be taken, is there not?

A. There is; but not always with one hole; there is only one aperture for one lens.

Q. 25. What is the object of that partition?

A. The object is to define the portion of the plate to be acted upon, and to guard the remainder of the plate from the action of the light.

Q. 26. Do you find in Exhibit V any partition between the plate and the lens, with an aperture in the centre, and which defines
189 the size of the picture, the portion of the plate to be acted upon by the light, and which guards the remainder of the plate from the action of the light?

A. I find in Exhibit V a slide, C, which contains an aperture in the centre for the purpose of dividing the plate, so as to protect the different portions as they are being acted upon by the action of the light; the back part of the slide C is the partition, and it also has a lip which is used to contract the size of the aperture.

Q. 27. Is any portion of the light from the lens shut off from the plate without the use of the lip?

A. It is.

Q. 28. Is not the aperture in the face, of which you speak, of the usual size of the rear aperture in the camera box?

A. There is not any definite size for the rear aperture in the camera box.

Q. 29. What makes you think the lip is used to contract the size of the aperture?

A. I so understand the specification.

Q. 30. Is there anything said in the specification of the lip's being used for that purpose?

A. I think there is.

Q. 31. Does not the specification say that the use of that lip is to cut

off the stray rays of light, and to match the successive portions of the picture more accurately?

A. I understand the use of the lip is for cutting off the stray rays of light, and for defining the size of the picture, so as to prevent one part of the picture from lapping over on to another.

Q. 32. The lip shown in Exhibit V can contract or enlarge the aperture only in one direction, can it?

A. In but one, in this exhibit.

HENRY J. LEWIS.

Subscribed and sworn to before me this 22d day of April, 1868.

JOHN T. LAMPORT,
United States Commissioner and Examiner.

The further hearing in this case is adjourned to April 3d, 1868, at 10 o'clock a. m., at same place, by consent of counsel.

190 At 10 o'clock a. m., of the 3d day of April, 1868, at the office of Messrs. Norton & Cowen, in the city of Troy, the parties to this action, by their respective counsel, appeared, and the counsel for defendant here introduced as a witness Alexander Bickers, who, being duly sworn by the examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Alexander Beckers; I am fifty-two years of age; I reside in the city of New York; my place of business is at No. 560 Broadway, New York; and I am a manufacturer of revolving stereoscopes.

Q. 2. How long have you been engaged in the manufacture of stereoscopic boxes and instruments; and where?

A. Eleven years; on Broadway, New York.

Q. 3. Have you been engaged in the sale as well as the manufacture of stereoscopic intruments? and, if so, state whether you have been engaged extensively in such business.

A. I am extensively engaged in such business, and am the owner of the patent not only in this country, but in France and Belgium, for manufacturing and selling the revolving stereoscopes, and I sell such manufactures throughout the United States.

Q. 4. State whether you were engaged as a photographer in any way before you manufactured and sold stereoscopes; and, if so, state how long, in what departments you were engaged, and where.

A. I was engaged as a photographer before manufacturing and selling stereoscopes; I was engaged in the daguerrian department for about fifteen years before that, first at the Merchants' Exchange in Philadelphia, Pa., and afterwards at No. 175 Broadway, New York, and at other places on Broadway, New York. I made the first large daguerreotypes ever made in New York.

(The defendant's counsel here offers in evidence a model, which is received, filed, and marked Exhibit W, Schoonmaker, by the examiner.)

Q. 5. Is Exhibit W, Schoonmaker, now shown you, an exact model, in principle, of a sliding plate-holder. and light-diminishing board or diaphram manufactured by you; and, if so, when did you first make the original?

A. It is an exact model in principle, and I first made the original in the year 1852.

191 Q. 6. Describe how the instrument or plate-holder, and the apparatus connected therewith, referred to in your last antwer,

was operated in making photographic pictures when attached to the camera box.

A. There is first a diaphram board marked No. 1, the opening of which is but one-quarter of the whole size of the plate; second, there is a revolving plate-holder, marked No. 2. In order to take the different pictures in succession, the plate-holder, after each impression is taken, is revolved a one-quarter revolution. The revolving is not done in the camera, but it is slipped outside of it, and then a lever catching a rachet in such way as to produce the motion desired. I do not mean to be understood that the plate-holder is revolved or removed from the camera box, but it is revolved or removed in the box from the field of the lens.

Q. 7. Does not No. 1, in model marked Exhibit W, Schoonmaker, form a necessary part of the camera box in the operation of making photographic pictures?

A. It does.

Q. 8. State whether or not, in making photographic pictures by the instrument marked Exhibit W, Schoonmaker, more than one upon the same plate, the result is performed by moving or sliding the plate in the plate-holder successively over the field of the lens? State the fact how it is performed.

A. It is performed by sliding the plate in the plate-holder over the field of the lens; that is, a part of it is done by that movement. The operation is performed by sliding and revolving the plate in the instrument successively, so as to bring the different portions of the plate before the field of the lens until the four pictures are taken.

Q. 9. Look at the instrument now shown you, and state what it is.

A. It is a plate-holder for a camera box.

(Defendant's counsel here offers such instrument in evidence, which is filed and marked by examiner Exhibit X, Schoonmaker.)

Q. 10. Did you manufacture the plate-holder marked Exhibit X, Schoonmaker? If so, state when and where you made it.

A. I did manufacture it in the year 1853, at No. 254 Broadway, in the city of New York.

192 Q. 11. Did you make photographic pictures with it; and, if so, for about how long a period, and where?

A. I did, and for about five years, at 264 and 411 Broadway, N. Y.

Q. 12. Did you sell to the public the pictures that you made by the instrument mentioned in your last answer?

A. I did.

Q. 13. Do you know that other photographers made pictures by the last-named instrument, or the same kind of instrument?

A. Yes; I do.

Q. 14. Please describe the instrument and the mode of making pictures by it, more than one upon a plate.

A. The instrument consists in two essential parts; the larger one is a frame with a small diaphram or light-board, behind which the plate-holder proper is moved in such a way that one-quarter of the prepared plate is each time, or after each move, [is] exposed to the light; the plate-holder proper being so much smaller than the space it moves over in the diaphram as to produce that effect, each picture, when it is taken on the plate, is taken in the axis of the lens. After taking the first picture on the plate, the next picture is taken by moving another portion of the plate before the field of the lens, and stopping long enough for the impression to be taken, and so continue changing the different parts of the plate before the lens until the four pictures are taken, which number said plate-holder is designed to take.

(The counsel for the plaintiff here admits that the instrument marked Exhibit X, Schoonmaker, is the same, substantially, in principle and operation in producing [sections] *pictures*, as the invention described in Southworth's patent, marked Exhibits A and B, Wing, herein.)

The counsel for plaintiff here cross-examined the witness, who further testified as follows:

Q. 1. Exhibit X, Schoonmaker, is a plate-holder actually manufactured by you, is it?

A. It is.

Q. 2. Where were you when you manufactured it?

A. In the city of New York, at No. 264 Broadway.

Q. 3. What was your business at that time, and who was with you at that time, if any one?

193 A. I was then engaged in the photographic business in company with Victor Piard.

Q. 4. How long were you in company with him?

A. About seven years.

Q. 5. Have you any memorandum of the time when you made Exhibit X, Schoonmaker?

A. I have of about the time, but not of the exact date.

Q. 6. Did you set down the fact that you had made a machine of this description?

A. I did not.

Q. 7. What is the memorandum to which you refer?

A. I had the idea, but was not able to execute it, as moving prevented it.

Q. 8. They you have no written memorandum of the time you made this plate-holder?

A. I may have, but I do not know that I have.

Q. 9. What enables you to fix the time when you made that instrument in 1853?

A. My receipts for rent of the new business place to which I moved.

Q. 10. When did you move to your new business place?

A. On the 1st of May, 1853.

Q. 11. In what month did you make that machine?

A. I am not positive.

Q. 12. Will you swear positively that you made it in 1853?

A. I do.

Q. 13. What enables you to swear positively that you made it in the year 1853?

A. Because I made it as soon as possible after the new place was all in order.

Q. 14. How do you know it was possible to make it before 1854?

A. Because it did not take but about three months to have the new place all in order.

194 Q. 15. Have you any distinct recollection of making this plate-holder, or of the time when you did it, or is your recollection the result of reasoning from the receipts you spoke of and the fact of your moving?

A. My recollection of making it is quite distinct; but the dates are obtained from the receipts and the circumstance of my moving.

Q. 16. In Exhibit W, Schoonmaker, the frame in which the plate-holder slides was about twice as long as the width of the camera box to which it was attached, was it not, so that about one-half of the length of the frame projected to one side of the camera box?

A. It was about twice as long, and nearly one-half of it projected to one side of the camera box.

Q. 17. After taking the first picture the plate-holder slid from behind the camera obscura proper to that portion of the frame which projected to one side of the camera, and was then partially revolved by the ratchet; it then slid back to its former position, and another picture was taken on another portion of the plate. Is not that correct?

A. That is so.

Q. 18. Then this machine did not take two pictures in succession on the same plate without sliding the plate from behind the camera obscura proper?

A. It did not take two pictures in succession on the same plate without sliding the plate in the frame from the aperature in the rear of the camera box.

ALEX. BECKERS.

Subscribed and sworn to before me this 3rd day of April, 1868.

JOHN T. LAMPORT,
United States Commissioner, and Examiner.

This matter was therefore further adjourned, by consent of counsel, to the 15th of April, 1868, at 10 o'clock a. m., at same place.

1868, APRIL 15—10 *o'clock a. m.*

The parties again appeared at same place, by their counsel, and the counsel for the defendant here introduces, as a witness, Rodney H. Dewey, who, being duly sworn, testified as follows:

195 Q. 1. What is your name, age, residence, and occupation?

A. My name is Rodney H. Dewey; I am forty-three years of age; I reside at Pittsfield, Mass.; I am a photographer by occupation.

Q. 2. How long have you been engaged as a photographer?

A. Since the spring of 1848.

Q. 3. Have you examined the original patent of A. S. Southworth, and also the reissue of the same, marked Exhibits A and B, Wing?

A. I have.

Q. 4. Are you acquainted with the principle and the mode of operation of the instruments named in said patent and reissue of same, in making photographic pictures therewith?

A. I am.

Q. 5. Since you have been engaged as a photographer, have you been familiar with the various modes of making photographic pictures in use in the country?

A. I have.

(Defendant's counsel here offers in evidence a camera box, with the apparatus for making photographic pictures, which is here filed, and marked by the examiner Exhibit Y, Schoonmaker.)

Q. 6. When and where did you first see Exhibit Y, Schoonmaker?

A. I bought it of Sisson & Parsons, of Albany, N. Y.; I cannot state when, but not less than seventeen years ago.

Q. 7. If you made any alteration in Exhibit Y, Schoonmaker, since you bought it of Sisson & Parsons, state when you made such alterations, and what they were.

A. I did make alterations in it as early as the year 1852—I think I might say in the year before. The alterations made were to cut out a section of the entire box, on the bottom of the box, of the size of the shield or plate-holder, so as to allow the plate-holder to pass through

said opening, thereby enabling me to make two or more pictures upon the same plate; this was done by exposing only a portion of the plate to the action of light coming through the lenses at a time—that made one picture after the proper exposure of one portion of the plate
196 to make one picture. The plate-holder was then moved down through the opening cut in the bottom of the box so as to expose other portions of the plate to the action of the light so as to make duplicate pictures upon the same plate without withdrawing the [the] plate-holder from the box until the whole were finished.

Q. 8. Do you know that other persons used this box that you have just described, or a box operated upon the same principle, for the purpose of making photographic pictures.

A. I do. One was Nelson R. Dewey, now deceased, who was then my partner; he made pictures with the same instrument.

Q. 9. State how the instrument that you have just described compares in principle and operation in making photographic pictures more than one upon a plate, with the instrument described in the patent and reissue of Southworth, marked Exhibits A and B, Wing, herein.

A. The principle is one and the same. The operation of both or either is simply to expose sections of the plate at different times upon the same object, thereby producing different pictures of that object upon the same plate by exposing different sections of such plate in the direct focus of the lens used for producing such pictures.

The witness, in being cross-examined by the counsel for plaintiff, further testified as follows:

Q. 1. How do you fix the time when you say you made the alterations in Exhibit Y, Schoonmaker, in 1852?

A. In 1852 I made the graduating class at Williams College; I there used this box; I mean that I then made the daguerreotypes of that class, to be lithographed from; the box was then altered as it now is; I recollect this well, because I then made pictures of four young ladies on one plate at Mr. S. Buckley's, at Williamstown.

Q. 2. Have you fully described, on your direct examination, Exhibit Y, Schoonmaker, as altered by you?

A. I think I have.

Q. 3. Do you mean to say, Mr. Dewey, that the mode of operation of this Exhibit Y is substantially the same as that of the instrument described in Southworth's patent?

A. It can be no other.

197 Q. 4. Do you mean anything more by your last answer than that in both the plate is moved over the field of the lens?

A. They both produce the same desired result.

Q. 5. Do you find, in the instrument described in Southworth's patent, any aperture for the purpose of passing the plate-holder through the bottom of the box?

A. I do not.

Q. 6. How was the first picture, after it was taken and passed through the bottom of the box, preserved from the action of the light?

A. A corresponding slot was cut through the top of the camera stand, so that after one exposure was made the plate-holder was passed through the slot of the camera and camera stand, leaving the picture produced by the first exposure excluded from light by passing into the dark chamber which was formed under the camera stand.

Q. 7. Then you could only use Exhibit Y when combined with a peculiarly constructed camera stand, or its equivalent?

A. It was so used, but not necessarily; it was not necessary that there should have been any hole in the camera stand, but as it was constructed I could not use it without the dark chamber in the camera stand, or a substitute for it, where I took more than two pictures on a plate.

Q. 8. Do you find any such dark chamber below the camera box in Southworth's patent?

A. I do not.

Q. 9. How are the pictures preserved from the action of the light while subsequent ones are being taken, in Southworth's patent?

A. By moving the exposed portion of the plate into the dark portion of the shield.

Q. 10. In Southworth's patent do you not find a partition between the plate and the lens, with an aperture opposite the centre of the lens, by which a portion of the plate is exposed at each operation?

A. I do.

Q. 11. Do you find such a partition in Exhibit Y?

198 A. In the use of Exhibit Y a diaphram was used in front of the plate-holder; such diaphram is not now contained in such exhibit; I do not know where it now is.

Q. 12. Please explain how that diaphram was used.

A. We had several different diaphrams, with apertures corresponding with the number of pictures we designed to take; the diaphram was made stationary or was firmly attached to the front of the plate-holder when used; the object of the diaphram was to cover a portion of the plate from the light while the impression was being taken on the exposed part; and we moved the diaphram and plate-holder at the same time; the instrument was focused upon the sitter if five pictures were to be made; the two on one side of the plate were made without removing the plate-holder from the box; then remove the plate-holder and re-focus the instrument upon the other side of the plate, and thus take two pictures more; then remove the plate-holder again and refocus it again, and then take the centre picture; to make three or four pictures through the centre of the plate, we did not remove the plate-holder from the box, but simply passed it down through the bottom of the box and then take the desired number of pictures; I mean that we could take any number of pictures, one over the other, according to the length of the plate, without taking it from the box; the plate did not move over an aperture in the diaphram, as in the Southworth patent; we moved the plate and aperture or apertures together.

The witness, being re-examined by plaintiff, further testified as follows:

Q. In making two pictures on one plate, did you need to use a diaphram at all?

A. We did not.

R. H. DEWEY.

Sworn and subscribed before me this 15th day of April, 1868.

JOHN T. LAMPORT,
United States Commissioner, and Examiner.

On this 17th day of April, A. D. 1868, the parties, by their respective counsel, appeared at 3 o'clock p. m. at the office of Messrs. Norton & Cowen, and the counsel for the defendant introduced as a witness George McKown, who, being duly sworn by the examiner, testified as follows:

199 Q. 1. What is your name, age, residence, and occupation?

A. My name is George McKown; I am forty-three years of age; I reside at Kingston, N. Y.; and am a photographer by occupation.

Q. 2. How long have you been engaged in making photographic pictures?

A. Eighteen years.

(Defendant's counsel here offers in evidence a camera box, which is received and marked Exhibit No. 1, Schoonmaker, by the examiner.)

Q. 3. Did you ever have and use a camera box and apparatus for making photographic pictures of which Exhibit No. 1, Schoonmaker, in construction, principle, and operation, is a substantial model?

A. I did.

Q. 4. When and where did you so have and use it?

A. In Philadelphia, in the year 1852; I have also used it in Kingston, Ulster County, N. Y., afterwards, I think, in October of the same year.

Q. Of whom did you get that box, and where?

A. I got it of Myron Shew, in Philadelphia.

A. 6. Describe how you made pictures, photographic pictures, by the instrument of which Exhibit No. 1, Schoonmaker, is a model.

A. I made them by using a plate-holder with two slides, one to act as a diaphram to keep the light from that portion of the plate that I wished to use for a future operation; the other to keep the light from the whole surface of the plate; I then put the plate-holder into the camera box; I then drew both slides out far enough to expose one-half of the plate; then shoved both slides back to their places; then slid the plate-holder so as to expose the other half of the plate to the field of the lens; I then drew the inner slide entirely out, leaving the half of the plate exposed to the light through the aperture of the outer slide, in order to make another picture on the other end of the plate, thus making a second picture on the same plate; all this was done without removing the plate-holder or the plate from the camera box.

200 Q. 7. Witness is here shown two photographic pictures, which are here marked Exhibit No. 2, by the examiner, and is asked: State whether or not you made the two pictures now shown you with the instrument you have described.

A. I did not make those pictures, but I made pictures of a similar description.

Q. 8. State whether or not the pictures marked Exhibit No. 2, Schoonmaker, were made at your establishment by an instrument such as you have described; and, if so, state how you know it?

A. Those pictures were made at Kingston, N. Y., by R. H. Hill, in 1852, or possibly as late as 1853, who was taught by me at that time how to make them; he sent for me at Philadelphia to go to Kingston to teach him how to make them.

Q. 9. State whether or not, from the time you first commenced making photographic pictures after the manner and style you have hereinbefore described, you have continued to make them; and, if so, up to how late a period have you made and sold them?

A. I made and sold them up to the year 1859.

The witness, being cross-examined by the plaintiff's counsel, further testified as follows:

Q. 1. Where is the original camera box which you say you bought of Shew?

A. I cannot tell what has become of it.

Q. 2. Is this Exhibit No. 1, Schoonmaker, an exact copy of that box?

A. It is substantially the same; there is no material difference.

Q. 3. When did you make or buy Exhibit No. 1, Schoonmaker?

A. I did not make it; Mr. Schoonmaker, under my direction, made it to conform to the box I have described as having been used by me.

Q. 4. State how you are able to say that the box you speak of was purchased in 1852.

A. I am able to so state, from the fact that the steamer Henry Clay was burned on the Hudson River at the time I was on my way to Philadelphia, in 1852.

Q. 5. What connection has that fact with the time of the purchase of that box?

201 A. It refreshes my memory of the time when I bought and used it in Philadelphia; I was residing there at the time; that is the only connection between the two events that I can now think of.

GEORGE McKOWN.

Subscribed and sworn to before me this 17th day of April, 1868.

JOHN T. LAMPORT,
United States Commissioner, and Examiner.

Hereupon the matter was adjourned, by consent of counsel, to the 24th day of April, 1868, at 10 o'clock a. m. at the same place.

1868, April 24th, at 10 o'clock a. m., the parties in this action, by their respective counsel, again appeared, and the counsel for the defendant introduced as a witness James B. Sinsabaugh, who, being duly sworn by the commissioner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is James B. Sinsabaugh; I am fifty-eight years of age; I reside at Geneva, N. Y.; and am a photographer by occupation.

Q. 2. How early did you become acquainted with the business of a photographer?

A. In the fall of the year 1843.

Q. 3. Where were you then?

A. At Syracuse, N. Y.

Q. 4. State whether, in 1843, you were engaged as an operator in photographing at Syracuse.

A. I was.

Q. 5. How long did you continue the photographic business after the year 1843, and where?

A. I have continued that business from that year up to the present time. I operated in Syracuse and adjoining towns up to the year 1848, when I removed to Geneva, where I have continued ever since.

(Defendant's counsel here offers in evidence a photographic picture, which is received and marked by the examiner as Exhibit No. 3, Schoonmaker.)

Q. 6. Did you make the two pictures marked Exhibit No. 3, Schoonmaker, and, if so, when and where?

A. I did make them at Syracuse in the fall of the year 1846.

202 Q. 7. Of whom are those pictures?

A. Of my daughter.

Q. 8. How old was your daughter at that time, and how old is she now?

A. She was in her third year then, and she is in her twenty-fifth year now.

Q. 9. Look at camera box now shown you, marked Exhibit O, Schoon-

maker, and state how the camera box and apparatus with which you made the pictures marked Exhibit No. 3, Schoonmaker, herein, compared in principle, construction, and operation in making photographic pictures with Exhibit C, Schoonmaker.)

A. It agreed with it exactly.

Q. 10. Explain how you used the plate-holder in making those two pictures marked Exhibit No. 3, Schoonmaker, two upon the same plate, without removing the plate-holder from the camera box.

A. After placing the camera box in a proper position, I took one picture by sliding the plate-holder part way into the box, so as to bring a portion of the plate only before the field of the lens, and then took the second picture by sliding the plate-holder entirely into the box, by which I exposed another portion of the plate before the field of the lens.

(Defendant's counsel here offers in evidence four photographic pictures on one plate as an exhibit, which are marked and filed by the examiner as Exhibit No. 4, Schoonmaker.)

Q. 11. State whether you made the pictures on Exhibit No. 4, Schoonmaker; and, if so, did you make them with the same instrument described in the last question and answer, and in the same manner therein described?

A. I made those four pictures, and I made them with the same instrument and in the same manner described in my last answer.

Q. 12. Did you make and sell to customers, at the time mentioned as the time when you made the pictures marked Exhibit No. 3, Schoonmaker, and since that time, which were made by you after the manner you made Exhibits No. 3 and No. 4, Schoonmaker?

A. I did make such pictures at that time, and sold them, for a short time afterwards.

The witness, being cross-examined by the counsel for the plaintiff, further testified as follows:

203 Q. 1. How long did you continue manufacturing pictures in the manner you have described?

A. I cannot say positively; I should say it was less than a year.

Q. 2. About how many sets of pictures of that description did you make and sell?

A. I cannot state the number, but I made and sold but a very few.

Q. 3. Why did you not make them more extensively?

(Counsel for the defendant objects to the question as calling for immaterial testimony.)

A. Because it was so much trouble to make them, and the pictures were so uncertain.

Q. 4. Why were the pictures made by this process uncertain?

A. Because in sliding the plate-holder we would sometimes slide or move the box, and sometimes we would push the plate-holder so that the light would strike over on to the picture already made.

Q. 5. Then the pictures made by the process you have already described were frequently imperfect, were they?

A. They were.

Q. 6. You used a camera box and a common plate-holder, did you not?

A. I did.

Q. 7. The sole alteration in the box was this half-partition shown in Exhibit O, Schoonmaker, was it not?

A. It was.

Q. 8. What became of the camera box that you used at Syracuse in the manner you have described?

A. It was destroyed by fire at Geneva, about three years ago.

Q. 9. Did it contain half-partition at the time it was destroyed?

A. I think it did; a new style of boxes had been got up, and I had thrown this one aside a number of years ago.

Q. 10. In centering the image before taking the picture, on what part of the ground glass was the image thrown, on the middle or on one side?

A. On one side.

Q. 11. Then in taking the picture the sitter was not placed directly in front of the lens, was he?

204 A. He was not; he was placed a little one side, so as to throw the image on that part of the ground glass not covered by the partition.

Q. 12. When taking the first picture, how was that portion of the plate not exposed to the action of the lens protected from the light?

A. By the slide of the plate-holder, which, when taking the first picture was drawn half-way out.

The witness being re-examined by the defendant's counsel, further testified as follows:

Q. 1. In making pictures by the instrument that you used in 1846, which you have described, if said instrument had been fastened firmly to a camera stand, would the difficulty that you have described on your cross-examination, in taking pictures, have been obviated or not?

(Plaintiff's counsel objects to the last question, first, as immaterial—the question being properly what the witness did, and what he might have done; second, as leading; third, as an attempt to cross-examine the counsel's own witness, the witness having stated that by the process he did use the pictures were imperfect and attended with too much trouble in the making of them.)

A. It would be so in a measure, but not wholly, because in sliding the plate-holder, sometimes not far enough and sometimes too far, the light would not strike the plate so as to make a perfect picture.

Q. 2. State whether you had a mark on the slide or plate-holder to show how far, in making a picture, to shove it in or draw it out.

(Objected to by plaintiffs counsel, as last above.)

A. I did have such mark.

Q. 3. State how the having the camera box of 1846, that you have referred to, fixed firmly on a camera stand, would have affected the operation in making pictures, in reference to the difficulty you have described on your cross-examination.

(Plaintiff's counsel objects to last question as last above, and because the question has been already answered.)

A. In part it would remedy the difficulties I have described, but I did not get perfect pictures every time, and could not do so. If they could do it, they were more successful than I was.

205 Q. 4. In taking three pictures upon a plate, how do the two outside pictures compare as to perfection with the middle one?

A. They compare well by being seated in a semi-circle.

Q. 5. In making three pictures on a plate, are the two outside pictures on a line with the lens or not? State how they stand.

A. They do not stand on a straight line.

J. B. SINSABAUGH.

Subscribed and sworn to before me this 24th day of April, 1868.

JOHN T. LAMPORT,
United States Commissioner, and Examiner.

This matter was here further adjourned to Friday, May 1, 1868, at 10 o'clock a. m., at the same place, by consent of counsel.

At 10 o'clock a. m., of this 1st day of May, 1868, at the office of M. P. Norton, in Troy, the parties, by their respective counsel, appeared, and the counsel for the defendant introduced as a witness William O. Smith, who, being duly sworn by the examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is William O. Smith; I am thirty-two years of age; I reside in Lansingburgh, but do business in Troy; and am a photographer by profession and practice,

Q. 2. How long have you been engaged in photography, and where have you been so engaged?

A. I have been so employed since 1854, in the city of Troy for most of the time; but I have been employed in Pittsfield, Mass., for a short time.

Q. 3. Examine Exhibit O, Schoonmaker, now shown you, and state how you could operate that instrumnnt in making photographic pictures, if the instrument was made fast on a camera stand or table. State whether there would be any difficulty in operating it.

(The last question objected to by plaintiff's counsel—1st, that it is immaterial; 2d, that the evidence has no application to any state of facts disclosed by the testimony in this case.)

A. There would be no difficulty in operating it.

Q. 4. In common use of camera boxes with sliding plate-holders, is it necessary to have them made fast in order to operate them successfully?

206 (Plaintiff's counsel objects to last question as immaterial.)

A. It is.

Q. How does the instrument Exhibit O, Schoonmaker, compare in its operation in making photographic pictures more than one upon a plate, in ease or difficulty, with other similar camera boxes now in use in the country?

A. They are the same. This exhibit can be worked just as handily and with equal success.

The witness, being cross-examined by plaintiff's counsel, further testified as follows:

Q. 1. Did you ever use a camera which was constructed and operated like the one now shown you, marked Exhibit O, Schoonmaker; if so, when and where?

A. I never did use such a one.

The witness, being re-examined by defendant's counsel, testified as follows:

Q. 1. State whether the camera boxes with sliding plate-holders, which you have used to make pictures, were or were not similar in their operation to the operation of the box marked Exhibit O, Schoonmaker, herein.

A. They were similar.

The witness, being again cross-examined by plaintiff's counsel, further testified as follows:

Q. 1. Did you ever use a box which had a half-partition covering one-half of the lens, as shown at Exhibit O, Schoonmaker?

A. I did.

Q. Did you ever use, for taking more than one picture upon a plate, a camera box which employed a common plate-holder without slides, as in Exhibit O, Schoonmaker?

A. I did.

Q. 3. In what respect, then, did the boxes you used differ from the box Exhibit O, Schoonmaker?

A. They differed from it in not having a partition inside, where they were worked without a slide.

WM O. SMITH.

Sworn and subscribed before me this 1st day of May, 1868.

JOHN T. LAMPORT,

United States Commissioner for Northern Dist. of New York.

207 The defendant's counsel here introduced as a witness Lorenzo C. Eonette, who, being duly sworn by examiner, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Lorenzo C. Eonette; I am fifty years of age; I reside in Troy, N. Y.; and am a dealer in photographic goods.

Q. 2. State whether you were ever engaged in making and selling photographic pictures. If so, state when, where, and for what length of time.

A. I have been so engaged from 1847 to 1860; for most of the time in Boston, Mass., and Troy, N. Y., and a part of time at various places in Vermont and Massachusetts.

Q. 3. Examine before you Exhibit O, Schoonmaker, and state whether you ever made or used a photographic instrument to make pictures more than one upon a plate, without taking the plate-holder from the camera box, similar in construction and operation to said Exhibit O, Schoonmaker. If so, state when and where you first made or used such instrument.

A. I made and used such instrument at Townsend, Vermont, in the year 1848.

Q. 4. State whether you knew of any other persons besides yourself who were acquainted with that instrument or similar instruments; and, if so, state who they were, and when you first knew them, and where.

A. I call to mind one man, whose name is Gardner Stone, who I personally knew was acquainted with that instrument, and its mode of operation in making pictures, in 1848, and there were others whose names I do not now recollect. I taught two others to use the instrument besides Mr. Stone. One of the other persons I taught was P. W. Tafft, of Townsend, Vermont, and the other was Mr. Shumway, whose first name I do not now recollect, of West Wardsborough, Vermont. I taught him in 1849, and Tafft also in that year. I can find a half dozen more persons whom I taught the use of that instrument.

Q. 5. How does the instrument Exhibit O, Schoonmaker, compare in its operation in making photographic pictures more than one upon a plate, in ease or difficulty, with other similar camera boxes now in use in the country?

A. The operation is just as easy and as fast with this exhibit, and as successful as that of any others now in use.

208 The witness, being cross-examined by plaintiff's counsel, further testified as follows:

Q. 1. Do you say that in a given time you can make as many pictures with Exhibit O, Schoonmaker, as you can with any of the cameras in use?

A. Yes; with the same number of slides.

Q. 2. Do you know of any cameras now in use having the same number of slides?

A. I do.

Q. 3. How many pictures can you take with Exhibit O, Schoonmaker, without removing the plate from the box?

A. I should think three; or if small-locket or ring pictures, a half dozen could be made.

Q. 4. Did you ever make more than two pictures at on operation with the instrument you say you used at Townsend, Vermont?

A. I don't think I did.

Q. 5. What became of the instrument you say you made at Townsend, V't?

A. I sold that instrument to a Mr. Savage, of West Milton, N. Y., I think, in the year 1850.

Q. 6. Did you ever use a similar instrument after you sold the one you have spoken of?

A. Yes, sir; often.

Q. 7. Have you now in your possession any instrument similar to the one you say you used?

A. I have half a dozen; except that those I now have do not contain the partition.

Q. 8. What enables you to say you made the first one in 1848?

A. I remember it particularly, because it was the first time I had put a partition into a box, and used it so.

Q. 9. Is that the best answer you can give to the last question?

A. I know it was in Townsend, Vermont, and I lived there only in the fall of 1848 and spring of 1849.

Q. 10. How long were you in that vicinity?

A. I was there from about the 1st of November, 1848, to July 1, 1849, in that vicinity.

209 Q. 11. What enables you to fix that as the time when you resided at or near Townsend, V't?

A. I fix it by referring to a board-and-room bill I have in my possession, showing that I was there during that period.

LORENZO C. EVERETT.

Subscribed and sworn to before me this 1st day of May, 1868.

JOHN T. LAMPORT,

United States Commissioner for Northern District of New York.

On the 10th day of July, A. D. 1868, at 10 o'clock a. m., at the office of M. P. Norton, in Troy, to which time and place the taking of testimony in this action has been continued, the parties, plaintiff and defendant, appeared by their respective counsel, and thereupon the counsel for defendant introduced as a witness Charles Thayer, who, being by me duly sworn, testified as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Charles Thayer; I am about forty-seven years of age; I reside in Braintree, Massachusetts, and keep an office at Charlestown, in the same State; and am a photographer by profession and practice.

Q. 2. How long have you been in the picture business, and where?

A. About twenty-three years, and for about twenty years of that time at Charlestown, Mass., and the residue of that time in Boston, and traveling through the towns in that vicinity, operating in making pictures. I was engaged in making pictures all of this period, except a portion of three years when I was away from Charlestown, and being out of health

did not pursue the business in Charlestown, but did so to some extent elsewhere.

(The defendant's counsel here offers in evidence a model of a camera instrument, which, by his request, is here filed and marked by the examiner Exhibit No. 14, Schoonmaker.)

Q. 3. Did you ever use an instrument like Exhibit No. 14, Schoonmaker, both as to construction and operation?

A. The box is not exactly like the one I used, but it may be called the same; the principle and the working of it are the same.

Q. 4. When and where did you use such instrument?

210 A. I used such an instrument at Charlestown, Mass., and in the year 1848; I told Mr. Southworth that it was nineteen or twenty years ago, that I would swear it was nineteen years ago; but I have since satisfied myself it was twenty years ago, being enabled to do so by the birth of my daughter, who was born after I used such instruments, and she will be twenty years old the coming fall.

Q. 5. Have you prepared a written statement of the way and manner in which you made photographic pictures in 1848, by the instrument that you have referred to in your testimony herein?

A. I have such statement with me.

Q. 6. Will you describe the way in which you made pictures with said instrument? Please describe.

A. I made them in two ways. The first way was by placing inside the box a diaphram, represented in Exhibit No. 14 as diaphram C, with an opening in the centre of it; I turn my box upon the side, and then focus my subject on the ground glass through the aperture or opening I have spoken of; the next step is to place the plate-holder in my box so that the further end of the plate, by drawing the slide, would only expose a certain part of the size of opening; next I move the plate further in the width of the opening so as to take a second impression, thus making two impressions upon one-half or one end of the plate. I then remove the plate-holder, and take it to a dark closet and change it end for end, and then place it or slide it back into the box, and take two other pictures on the other half or end of the plate, as the two first were taken.

Q. 7. Were those pictures made in the mode described in your last answer made in the axis of the lens?

A. They were.

Q. 8. Describe the second mode of making such pictures which you have said you used with said instrument.

A. I placed the box upon its side, as in the first mode, and used a diaphram with an opening in the lower right-hand corner; next I focused my subject on the ground glass so as that the picture would come before the opening in the diaphram; then I placed the plate and moved it in so that the picture would be taken on the first corner of the plates I moved in; and then moving it further in I took a second picture on the same side of the plate. I then withdrew my plate and moved my diaphram from bottom to top, and readjusted the box to the sit-

211 ter and made two pictures on the upper side of the plate as I had before made them on the lower side.

Q. 9. Did you make and sell those pictures, described in your answers herein, to your customers?

A. I did.

Q. 10. Did any one else know of your making these pictures? If so, state generally what persons knew, and how they knew.

A. There were. I made them for my customers, for locket and ring

pictures generally; most of those I made were made in that way for that purpose. There were three or four artists that were then in the habit of visiting my rooms; one of them, in particular, suggested the mode I last described, on seeing me operate according to the first-described mode, by which he said I could make larger pictures, and my object, in adopting that mode, was to avoid the effect of the perspiration of my hands, in handling the plate in the first process, and also to get a larger picture.

Q. 11. During how long a period did you use the two processes described by you for making pictures?

A. Some ten years; the last process mostly.

Q. 12. During the time you were making the pictures which you have referred to, did you keep a public room for that work to which your customers came?

A. I did.

Q. 13. Did you make said pictures publicly and in the presence of your customers and others?

A. I did.

Q. 14. What became of the photographic instrument with which you made pictures in 1848, as you have described?

A. I do not know what has become of it. I sold it and others like it since, and now I have one like it in use.

Q. 15. Were the persons to whom you sold said instruments engaged in your office learning the business?

A. They were.

The witness, being cross-examined by the plaintiff's counsel, further testified as follows:

Q. 1. The first diaphram you used was similar to the portion of Exhibit No. 14, Schoonmaker, marked diaphram C, was it?

A. It was.

212 Q. 2. When did you last use a diaphram like the one marked C spoken of in your last answer?

A. I think I have used it within the last two years, in a different kind of box. The box I used it in was what is called a bellows-box.

Q. 3. When did you last use the apparatus which you say you used in 1848?

A. I cannot tell you that; I frequently used it for a number of years.

Q. 4. How long since you have used it, to the best of your recollection? I mean the apparatus which you say you first used.

A. I cannot tell you. I used it for a time, but after I commenced using the other process I did not use the first very generally, but I used it occasionally.

Q. 5. To the best of your recollection, how long did you continue to use it occasionally?

A. I cannot tell you. I used it occasionally for a number of years, but not extensively, except when I had copying to do, such as rings and pins and the like.

Q. 6. How long since you used either of the processes described on your direct examination?

A. Within two years.

Q. 7. Do you mean, by your last answer, that you used this process within two years, with the same apparatus that you used in 1848?

A. No; I used it with a different box, a bellows-box.

Q. 8. Please state when you used either process last, with the same apparatus that you used in 1848 or 1849.

A. I think it must have been eight or ten years since I used it with that apparatus, or a like one. I may have used a dozen since then, but they have passed away; I mean since 1848.

Q. 9. The camera box that you used was the same box then in common use, was it not?

A. It was, with a little alteration; that is, there was a lip on the box as then used, which I removed, in order to use it as I did.

Q. 10. Have you, at the present time, any of the apparatus you used in 1848 or 1849?

A. I have not.

213 Q. 11. What became of the apparatus you then had?

A. I can't tell; I sold it; I disposed of the boxes, and perhaps the diaphrams might have gone with them; I can't tell whether I sold the diaphrams with them or not.

Q. 12. When did you get "Exhibit No. 14, Schoonmaker?"

A. I saw it last evening for the first time, and I recognized it as being the same as I formerly used; that is, it has the same movement and is worked in the same way; it was shown me by Mr. Schoonmaker, and contains the same principle for working my process.

Q. 13. What enables you to fix the date when you used that instrument in 1848?

A. The age of a daughter of mine, who was born in Charlestown, who is now over nineteen years of age, and will be twenty next fall or winter, and the time I moved to Charlestown, which was the spring before she was born.

Q. 14. Will you please state what connection there is between the first use of that instrument by you and the birth of your daughter?

A. The connection is this, that I used the instruments the first year I lived in Charlestown, and my daughter, being born that year, gives me the length of time since.

Q. 15. How do you know that you used that instrument in 1848?

A. I know it because I recollect it.

Q. 16. Have you any written memorandum book or paper or anything of that nature which will assist you in fixing the dates in which you used the instrument in question?

A. I think of nothing more than I have already stated.

Q. 17. Were you in the habit of explaining to your customers the manner of your making pictures?

A. I was; but I do not recollect of explaining this particular process to any of my customers. It was my custom to explain generally whatever they desired to know.

Q. 18. When you desired to take a picture with the diaphram C, how did you ascertain how far to shove it into the camera box for the purpose of taking the first picture?

A. By measuring and marking it on the upper side of the plate-holder.

214 Q. 19. How far did you slide it in for the purpose of taking the second picture?

A. I slid it in far enough so that the two pictures would cover nearly the first half of the plate.

Q. 20. Then do you mean to say that the four pictures would cover the whole plate?

A. They would not cover the whole plate, but they would cover the four spaces so as to spoil the whole plate for any other purpose; there would be a row of four pictures right along on the plate.

The witness, being re-examined by defendant's counsel, further testified as follows:

Q. 1. When you took a group of pictures, two or more, on a plate for a customer, with the instrument you used in 1848, as you have described, was it your custom to let the customer examine for himself or herself, and select such one as was most satisfactory to him or herself?

A. It was.

CHARLES THAYER.

Subscribed and sworn before me this 10th day of July, 1868.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

The further taking of testimony in this case postponed to July 17th, 1868, at 10 o'clock a. m., at Norton's office, in Troy.

1868, July 17th, at 10 o'clock a. m., at the place last aforesaid, the counsel for the respective parties appeared, and this matter was further adjourned by consent to the twenty-first day of July, 1868, at 10 o'clock a. m., at the same place.

At 10 o'clock a. m., on the 21st day of July, 1868, the defendant and his counsel appeared before me, the said examiner, the plaintiff by his counsel also appearing; and thereupon the counsel for said defendant offers in evidence, as an exhibit, a book, styled "The Photographic and Fine Art Journal," published in the city of New York, by H. H. Snelling, in the year 1854, and in London, England, by Toubuer & Co., No. 12 Patria Nostre Row, new series, vol. 1. It is a periodical journal, bound in book form, and the same work was formerly published by William B. Smith, in the city of New York; which book, as published by said H. H. Snelling, is here marked by the examiner and filed as Exhibit No. 15, Schoonmaker, this day.

215 Counsel for defendant calls attention especially to pages 82 and 83 of said last exhibit, and to the article on said pages on the "Stereoscope, and its application to Photography," by M. Claudet, and invites the particular attention of the court thereto.

The counsel for defendant then offered in evidence a camera box, made after the description contained in the article of M. Claudet, referred to in the last exhibit, which said camera box was filed and marked "Exhibit No. 16, Schoonmaker," this day, by one John T. Lamport, United States examiner, &c.

The counsel for plaintiff objects to the introduction of the last exhibit as immaterial.

And thereupon defendant's counsel recalls as a witness Eugene S. M. Haines, who further testified as follows:

Q. 1. State where, so far as you know, did Exhibit No. 16, Schoonmaker, come from.

A. It came from Paris, in France.

Q. 2. State how you know it came from Paris.

A. I know from information derived from the party who owns it, and the party who imported it.

(Plaintiff's counsel objects to the last two answers as being hearsay, and moves to strike them out on that ground.)

Q. 3. Did you see the bill of lading or the invoice of importation of Exhibit No. 16, Schoonmaker?

(Plaintiff's counsel objects to the last question as immaterial, calling for hearsay, and not the best evidence.)

A. I did.

Q. 4. Have you examined No. 16, Schoonmaker, and the principles and operation of it, so that you understand it?

A. I have.

Q. 5. Have you examined the article written by Mr. Claudet, contained at pages 82 and 83 of Exhibit No. 15, Schoonmaker, so that you understand the instrument therein described, and the principles and operation of said instrument in making pictures thereby?

A. I have.

Q. 6. State how Exhibit No. 16, Schoonmaker, in its principle and operation in making pictures, compares with one of the instruments described by Mr. Claudet in Exhibit No. 15, Schoonmaker?

A. It is the same thing.

216 Q. 7. State whether the instrument No. 16, Schoonmaker, or said instrument described by Mr. Claudet, are each susceptible of being used for any kind of photographing.

A. Certainly, of any kind of photograph.

Q. 8. State whether either of last-named instruments can be used to make two pictures on the same plate by moving half of the plate before the axis of the lens and taking an impression, and thereby moving the other half of the plate before the axis of the lens and the taking another picture or impression.

(Plaintiff's counsel objects to the last question, and to asking what might have been done by any machine. The question, if material at all, should be confined to the way in which the machine has actually been used, according to the design of the inventor.)

A. Yes; it can be used in that way.

(Defendant's counsel here offers in evidence a volume styled "The Photographic Art Journal," published in 1853, by W. B. Smith, in New York City, containing volumes 5 and 6 of that journal, bound together, and calls particular attention to volume 6, at pages 142 to 146, inclusive, and 147 of same volume, which is here filed, and marked as Exhibit No. 17, Schoonmaker, by the examiner, which is the article of Mr. Latimer Clark on an arrangement for taking stereoscopic pictures with a single camera.

Defendant offers in evidence camera box and movable table, being a similar instrument to the one described in the article of Latimer Clark, contained in Exhibit 17, Schoonmaker.

The counsel objects to the reception of said camera and movable table upon the ground that it is immaterial.

Received and marked Exhibit 18, Schoonmaker.)

Q. 9. Have you examined the said article of Latimer Clark referred to in Exhibit No. 17, Schoonmaker, and the instrument described for making pictures; and, if so, do you understand the principles and operation of said instrument?

A. I have examined them, and do understand the operation of the said instrument.

Q. 10. Did you ever see the instrument described by Latimer Clark in Exhibit No. 17, Schoonmaker, described in any other publication?

A. I have.

217 Q. 11. State what publication it was.

(Objected to by plaintiff's counsel upon the ground that prior

publication cannot be proved in this manner; that the book should be produced.)

A. In Hardwhick's Phothographic Chemistry, published in London, England, also in Humphrey's reprint of that work in this country.

Q. 12. Have you examined the instrument marked No. 18, Schoonmaker; and, if so, do you understand the principles and operation thereof in making pictures therewith?

A. I have examined it; and understand its principles and operation when so used.

Q. 13. State whether Exhibit No. 18, Schoonmaker, in its principles and operation, when used, is made after the description, principles, and operation of the instrument described by Latimer Clark in Exhibit No. 17, Schoonmaker.

A. It is.

Q. 14. Please to describe the instrument marked No. 18, Schoonmaker, accurately in the way it is used in making pictures?

A. The camera box A, sliding on parallel bar marked E, which rest on platform marked D, is focused in the usual manner, and a picture taken. The camera A is then moved latterly about two and a half inches, and the plate-holder, marked B, is then given a latteral motion, or moved over the axis of the lens, and another picture taken on the other half of the plate, which size is determined by the diaphram C.

Q. 15. State whether or not each picture, when taken by the process you described in your last answer, was taken exactly or not in the centre of the axis of the lens.

A. An imaginary portion of the picture was taken in the centre of the axis of the lens.

Q. 16. From the description given of Latimer Clark in Exhibit No. 17, can you make the instrument therein described?

A. I can.

Q. 17. From said description of Latimer Clark, can any good mechanic make the instrument described by him?

A. Yes; and even a common mechanic can.

218 Q. 18. From the description of M. Clandet, given in Exhibit No. 15, Schoonmaker, can any good mechanic make the machine therein described?

A. Yes; he can.

(The defendant's counsel here offers in evidence the drawing of a camera obscura, which is here marked by the examiner "No. 19, Schoonmaker."

He also offers in evidence a photograph of three globes on each side of a card-board, which, by his request, is here marked "No. 20, Schoonmaker."

And defendant's counsel offers in evidence another card-board, with photograph laid out in squares, which is here filed, and marked No. 21, Schoonmaker, by examiner.)

Q. 19. Look upon "Exhibit No. 19, Schoonmaker," and describe what it is.

A. It is a representation of the reflection of light from a given object passing through a lens and reflected on a focus-glass of a camera box. In this exhibit there are four lens or glasses. The subject in this exhibit is an arrow, placed at a given distance in the front of the lens, the upper end of which arrow is the point, and the lower is the feather end of it; a picture of this arrow is produced on the ground glass in an inverted position. This exhibit represents the lines of light crossing each other after passing through the front lens; they then separate and

diverge through the back or distributing lens, reflecting the arrow in an inverted position on the ground glass; this is the way the picture is produced.

Q. 20. Where is the axis of the lens?

A. All that portion of the illuminated surface of the focusing-glass or plate. When the glass or lens is removed, the axis of the tube would be an imaginary line drawn through the centre of the tube at a right angle to the plane of the focus-glass. But the moment the glass is replaced in the tube, the character of the axis is then changed, as the rays of light cross each other at a given distance between the lens and at the axis of the tube.

Q. 21. Can you make a picture without using any other part but the very centre of the lens?

A. No, sir.

219 Q. 22. State the reasons why you cannot.

A. There would be no illuminated surface, because the center is an imaginary point.

Q. 23. State whether a picture can be made in any part of the illuminated surface, outside of the centre of the lens, as good as if made in the very centre of the lens.

A. It can be.

Q. 24. Look at Exhibit No. 20, Schoonmaker, and state whether you made that photograph of globes; and, if so, under what circumstances?

A. I made them with an ordinary portrait tube, under ordinary circumstances, with the usual chemicals, and they were on a straight line opposite the tube, distant about six feet from the front of the lens; the middle ball being exactly opposite to the centre or axis of the tube. The size of the balls was about six inches in diameter, and were round, and the distance between the centres of the two outside balls was about three feet.

Q. 25. Look at Exhibit No. 21. Schoonmaker, and state whether you made the photograph therein laid out in squares.

A. I did.

Q. 26. State how and under what circumstances you made it.

A. I made it with the same instrument with the same conditions that I made Exhibit No. 20, Schoonmaker. The size of the card-board which I copied from was 22x28 inches, divided into two-inch squares, or squares of two inches each.

Q. 27. Which is the most expensive, in altering over an ordinary camera, to fix the box so that the plate-holder would slide in the rear over the field of the lens, or fixing an apparatus on the front of the camera box, so that the lens could move over the plate?

(Plaintiff's counsel objects to the last question as immaterial.)

A. It is the most expensive mode to fix an apparatus on the front of the camera box, and that mode was given up years ago, on account of the expense of it; and not only that, but it is not always practicable to do it.

And the said witness, being re-cross-examined by plaintiff's counsel, further testified as follows:

220 Q. 1. Are you interested, directly or indirectly, in the result of this case?

A. I am not, no more than any photographer.

Q. 2. Do you know that defendant Schoonmaker has called upon other photographers throughout the United States to aid him in defending this case?

(Counsel for the defendant objects to the last question as calling for immaterial testimony, and for incompetent and improper testimony.)

A. I only know it from hearsay and what I have read.

Q. 3. Have you seen a circular issued by him on the subject and for that purpose?

(Counsel for defendant objects to last question on same grounds as last stated.)

A. I have seen such circular.

Q. 4. Are you the person whose name is mentioned in said circular to whom the contributions were to be sent?

A. I am not. I have never seen any such contributions.

Q. 5. Have you contributed any money to aid defendant in defending this suit?

A. I have not.

Q. 6. Do you mean to say that, in your opinion, the machine marked No. 16, Schoonmaker, was designed by the inventor to take more than one picture upon the same plate?

A. No; it was not designed to take more than one picture on the same plate.

Q. 7. Do all camera tubes used for photographic purposes contain four lenses.

A. They do not.

Q. 8. What is the least number used in any tube with which you have been acquainted?

A. One; but all portrait tubes contain four glasses.

Q. 9. Dr. Olmsted, in his work on Natural Philosophy, at page 509, says that the axis of a lens is a line passing through its centre perpendicular to its opposite surfaces. Do you consider that definition incorrect?

221 A. No, I consider that definition correct.

EUGENE T. M. HAINES.

Subscribed and sworn before me this 21st day of July.

JOHN T. LAMPORT,
United States Commissioner and Examiner for Northern District of New York.

The defendant's counsel here again recalls the defendant Christopher C. Schoonmaker as a witness, who further testified as follows:

Q. 1. Did you attend upon the examination of Albert S. Southworth in this case before Examiner Warren, in May last, in the city of Boston, Mass?

A. I did.

Q. 2. If during said examination you heard said Southworth on his cross-examination by the defendant's counsel herein make any declaration refusing to answer certain questions put to him, state what those declaration were as near as you can recollect them.

A. I did hear said Southworth make declarations during that cross-examination refusing to answer certain questions put to him by the defendant's counsel, in which he stated that he would not answer any questions that he could see would injure the complainant in this action, on the final argument of this case, and he continued to refuse answering such questions.

(Plaintiff's counsel objects to the last question and answer thereto, upon the ground that the proceedings at Boston were before an examiner of this court, whose duty it was to take and who did take every-

thing said by the witnesses in the course of their examination which was required to be taken down by either party, and the minutes of said examiner so taken are the best evidence of what took place on said examination.

Plaintiff's counsel further objects that the declarations of Mr. Southworth are not evidence in this case, and that defendant cannot prove his declarations for the purpose of impeaching him, without first questioning him specially in regard to the same.)

Q. 3. State whether upon said cross-examination when said Southworth refused to answer, as you have before stated, the defendant's counsel herein did not repeatedly ask said Examiner Warren to write down upon his minutes said Southworth's language of refusal. State also whether said examiner did not refuse and neglect to write down such refusals of said Southworth.

222 A. I did hear the defendant's counsel, Mr. Townsend, request said Examiner Warren to write down said Southworth's refusals, and the language of them; and said examiner refused to do so, and said he had no right to do it.

CHRISTOPHER C. SCHOONMAKER.

Subscribed and sworn to before me this 21st day of July, 1868.

JOHN T. LAMPORT,
United States Commissioner and Examiner for the Northern District of New York.

WING
vs.
SCHOONMAKER.

STATE OF TENNESSEE, *County of Shelby:*

Deposition of witnesses taken and subscribed before me, Rueben Dailey, U. S. commissioner, D. W. T., and duly appointed as such by Judge Conally F. Trigg, judge presiding U. S. circuit and district court, district West Tennessee, on the 8th of July, 1868, between the hours of 2 p. m. and 6 p. m., at the office of the above-mentioned U. S. commissioner, in the city of Memphis, Tenn., relative to the case of Wing vs. Schoonmaker, now pending in the U. S. circuit court, northern district of New York State.

Frederic Seibert, a citizen of Memphis, Tenn., to me known as of lawful age, and being to me at the time and place aforesaid produced, and being by me duly sworn to testify the truth, the whole truth, and nothing but the truth in regard to the matter in controversy in this suit, then and there on oath aforesaid deposed as follows to wit:

Q. 1. What is your name, age, residence, and occupation?

A. Frederick Siebert; forty-nine years of age; Memphis, Tenn.; occupation, a saloon-keeper.

Q. 2. Have you been in the photographic picture business; if so, how long, and where?

A. I came in this business, I think, in 1849, in Berlin, Prussia. I was engaged in the photograph business, I think, fourteen or fifteen years.

Q. 3. Have you lived in Germany or in other parts of Europe?

A. I have; I was born there, and traveled over all Germany, Russia, and Poland.

Q. 4. When did you come to this country?

A. In 1854.

223 Q. 5. Did you bring a photographic instrument with you? Can

you introduce the said instrument as an exhibit in this cause? If so, let it be marked No. 10, Schoonmaker.

A. I brought a photographic instrument with me. I can introduce the said instrument as an exhibit in this cause.

(The witness here presented the instrument which, in the answer to question 5, he says he brought with him to this country. The same is marked "Exhibit 10, Schoonmaker," and made part of this record.)

Q. 6. Will you describe the way you made pictures with this instruments referred to in your last answer.

A. After drawing my focus in the usual manner, I introduced the plate-holder and plate; moved one end of it in the field and axis of the lens, and exposed that portion of the plate a sufficient time to make a picture, then I moved the plate-holder along far enough to bring another portion into the field and axis of the lens and made a second picture, and then inverted the plate-holder, and made two more in a like manner.

Q. 7. Did you make pictures with it in this country; if so, when and where?

A. In New York City, in 1854.

Q. 8. Did you make pictures with it in the old country; if so, at what time and where?

A. Yes, sir; in 1851, in Berlin, Prussia.

Cross-examined.

Q. 1. State particularly the date of your landing in this country and where.

A. It was either the 22d or 23d of December, 1854, at New York City.

Q. 2. Also state when and where you first used the camera box you have described for making pictures by the process you have mentioned.

A. In New York City, in the year 1854, on Broadway—I do not recollect the number—two days after I arrived.

Q. 3. State particularly and fully the motion given to the plate-holder of the camera you have described in taking more than one picture on one plate, and how many pictures you made without removing the plate-holder.

224 A. I refer to my answer to the 6th question; it is the best answer I can give to the above question. I refer to it as my answer.

Q. 4. Please state how long you had the camera box mentioned by you, and the kind of pictures you made with it, and, as nearly as possible, the number produced by you with said box, and by the process you have described.

A. I think I used it since 1850 or 1851; from that time up to the spring of 1855. I made daguarreotypes with it. I cannot tell the number—I used it every day—it would amount to thousands of them.

And further this deponent saith not.

FREDERICK SIEBERT.

Also at the same time and place personally appeared before me H. A. Balch, known to me to be of lawful age, a resident of Memphis, Tenn., a witness in behalf of the defendant, and being by me first cautioned and duly sworn to testify the truth, the whole truth, and nothing but the truth in regard to the matter in controversy in this suit, then and there, on oath aforesaid, deposed as follows, to wit:

Q. 1. What is your name, age, residence, and occupation?

A. H. A. Balch; residence, Memphis, Tenn.; age, 42; occupation, photographer.

Q. 2. Have you been in the photographic picture business; if so, how long and where?

A. I commenced the photographic picture business in 1846, and have remained in it all the time, except the year 1848 and part of 1847. I have operated in the following States: Ohio, Indiana, Illinois, Kentucky, Tennessee, Alabama, and Mississippi, and for the last six years in Memphis, Tenn.

Q. 3. Did you ever use an instrument that made more than one picture on a plate with one lens, without taking the plate-holder from the camera box; if so, when did you first use it and where?

A. I did, in Joliet, Ill., in the winter of 1849–'50.

Q. 4. What was said instrument like, and can you introduce it, or a model of it, as an exhibit in this cause? If so, let it be marked "Exhibit No. 12, Schoonmaker."

225 Q. I cannot introduce the original instrument and have no model made of it. I refer to the following diagram and written description of the same, marked "Exhibit No. 12, Schoonmaker," which is the fullest and best answer I can give to the above question.

(Here follow diagrams marked page 226.)

227 The above diagrams represent an instrument altered from an old-fashioned daguerreotype (1-4) quarter camera box. My alteration or improvement on said box was cutting off the front and arranging a sliding front (*c*) in Fig. 1 and (*c*) in Fig. 2; also fitting a diaphram (*e*) in both figures, which had an opening in it, and (*d*) in Fig's 1 and 2 an upright piece of wood, which was perpendicular with, (*e e*,) against which the tablet faced in sliding into the box, with top of tablet as low as top of, (*d*,) the slide drawn and plate exposed; then shoved down again as far as the size of the opening (*a*) required, and then exposed, and then shoved again as many times as the size of the opening (*a*) required, or the size of the plate allowed. Fig. (2) would only make two pictures, as one-half of the plate was exposed; and then the other half used usually in making daguerreotypes for lockets, and sliding the tube down and taking out the diaphram (*e*) used for ordinary pictures.

The description of figures (*a*) opening for making more than one picture, through which the light passed from the lense (*b*) to the plate in the tablet placed in the box through the opening (*f*) against the diaphram (*e*) and upright, (*d*,) and shoved downward until the opening (*a*) would cover sufficient of the plate, then the light passing through the lens (*b*) and opening (*a*) in a direct line until long enough to make a picture, then slide the tablet downward, and expose again until the required number were [were] made, according to size of opening, sometimes would make four, three, and two, as I wanted. If no more than one was wanted, take out the diaphram, (*e*,) and slide down the tube to the level of the box, and make one for ordinary work. This box was arranged in the winter of 1849 and 1850, at Joliet, Ill., the first year of my stay there. I used slides to make four pictures the year before.

"Exhibit 12, Sbhoonmaker."

I certify that the above was handed to me as Exhibit 12, Schoonmaker, by the witness H. A. Balch.

REUBEN DAILEY,
United States Commissioner District West Tennessee.

Q. 5. Will you describe the way and manner you made daguerreotypes or photographic pictures with the said instrument referred to in your last answer?

228 A. After focusing through the opening "A" on Exhibit 12, Schoonmaker, the tablet containing the plate was put into the instrument far enough down to bring the lower part of the plate before the opening; the slide was then drawn, and the plate exposed sufficient length of time to form a picture; then shoved downward a sufficient distance to expose a sufficient portion of the plate to take another picture immediately above that already taken, and so on as many sittings as the size of the opening "A" would permit, as I had several sized openings in the diaphrams for different sized pictures.

Q. 6. What has become of the original instrument referred to in this cause?

A. I sold it to a gentleman whose name I cannot recollect. It was at Joliet, Ill., in the year 1852, I think.

Cross-examination.

Q. 1. Please state the facts which enable you to fix the date at which you used the said instrument you have mentioned. State fully and at large, as though you were fully interrogated as to each fact.

A. It is because it was the first year I went to Joliet, Ill., and in the winter before I was married. I remember making half a dozen pictures for my wife on a quarter-plate before I married her. This was in the month of March, 1850, and I was married in the June following.

Q. 2. State particular and fully the motion given to the plate-holder in taking more than one picture on one plate, and how many pictures you made without removing the plate-holder from the box.

A. The motion was downward, and I have taken six on a quarter-plate. I refer, for a fuller description, to my answer above and the explanation to "Exhibit 12, Schoonmaker."

Q. 3. Please state how long you used the camera box mentioned by you, and the kind of pictures you made with it, and as nearly as you can the number produced by you with said box, and by the process you have described.

A. I used it about 2 1-2 years. I made daguerreotypes with it. I cannot state positively; never kept any account. It was used for making locket-pictures principally; probably fifty locket-pictures, and probably more; have no idea how many.

H. A. BALCH.

229 STATE OF TENNESSEE, *County of Shelby:*

I, Reuben Dailey, an acting and duly appointed United States commissioner for the district of West Tennessee, do hereby certify and make known that the foregoing depositions of Frederick Siebert and H. A. Balch were taken before me on the 8th of July, 1868, between the hours of 2 p. m. and 6 p. m.; that the examinations, responses, and statements of each of said deponents were reduced to writing in my presence, and by the said deponents respectively sworn to and subscribed at the time and place aforesaid, and said deponents are residents of Shelby County, in the State of Tennessee. I do further certify that the above depositions have not been out of my hands since taking the same, and that they were deposited and sealed by me without passing into other hands.

In testimony whereof I have hereunto affixed my hand and seal.

This done at Memphis, Tenn., July 9th, 1868.

REUBEN DAILEY,

United States Commissioner District West Tennessee.

230 For Mr. A. Hesler, Chicago, Ill., in cause Wing vs. Schoonmaker, U. S. circuit court, northern district of New York.

Q. 1. What is your name, age, residence, occupation?

A. My name is A. Hesler; my residence, Chicago, Ill.; I am a dealer in photographic goods.

Q. 2. Have you been in the photographic picture business? If so, how long and where?

A. I began making daguerreotypes in the spring of 1848, and continued in the photographic business till 1866; from 1850 to 1854 was most of the time in Galena, Ill.; from 1854 to 1866 in Chicago, Ill.

Q. 3. Did you ever use an instrument that made more than one picture on a plate with one lens, without taking the plate-holder from the camera box? If so, when did you first use it, and where?

A. In Galena, in the fall of 1850, I used a moving plate-holder for making several pictures on one plate with a single camera.

Q. 4. What was said instrument like, both in construction and operation, and can you introduce it, or a model of it, as an exhibit in this cause? If so, let it be marked Exhibit No. 13, Schoonmaker.

A. I prepared a camera for this purpose by taking a common 1-4 box, and attaching a board in which was an opening of the size I desired each picture, said opening being exactly in the focus and axis of the lens. The board was of a size to extend beyond the camera box on the top and sides, to protect the plate from light in moving it in different positions. To guide the plate properly to its different positions, I prepared rows of blocks of wood [of wood] of suitable size, which were piled one on top of the other, on which to place the holder. The number of rows used and the number of blocks in a row corresponded with the number of pictures to be made. This will be readily understood by the model, (No. 13,) in which A is the camera box; B, the board with an opening; C, the plate-holder; and D D, the blocks.

Q. 5. Will you describe the way and manner you made daguerreotype or photographic pictures with said instrument, referred to in your last answer?

231 A. I used this instrument by placing my plate in a common plate-holder, and after adjusting and focusing my camera in the usual way, so as to bring the subject into the opening, I remove the ground glass, and place the holder up to the board B, at the top and to the right hand of two rows of the blocks, when I made an exposure. I then removed or turned back one little block, moved the holder to left the width of the block removed, and made another exposure, and so on across. I then removed the next row in the same way.

Q. 6. What has become of the original instrument, referred to in this cause?

A. I left said instrument in Galena in 1854. The gallery in which it was left has since been burned.

Cross-examined.

Q. 1. Please state the facts which enable you to fix the date at which you used the instrument you have mentioned. State fully and at large, as though you were particularly interrogated as to each fact.

A. In the winter of 1850 and 1851 I was for a few weeks doing business at Dubuque, Iowa, and I used this camera previous to going there.

Q. 2. State particularly and fully the motion given to the plate-holder in taking more than one picture upon one plate, and how

many pictures you made without removing the plate-holder from the box.

A. The motion given to the plate was first lateral or across; then vertical. The number of pictures I thus made was nine, and sometimes fifteen.

Q. 3. Please state how long you used the camera box mentioned by you, and the kind of pictures you made with it, and, as nearly as you can, the number produced by you with said box, and by the process you have described.

A. I used the box occasionally for two or three years for making daguerreotypes. I should think I had made as many as one hundred impressions with it.

ALEXANDER HESLER.

Subscribed and sworn to before me this 30th April, 1868.

PHILIP A. HOYNE,
Commissioner for New York.

232 *Exhibit U, Schoonmaker.*

Isaac Van Bunschoten, joint inventor with, and assignee of, J. G. Woodbridge and W. Mann, New York, N. Y., letters-patent No. 6357, dated April 17th, 1849.

To all to whom these presents may come:

Know ye that we, Isaac Van Bunschoten and John G. Woodbridge, daguerreotypists, and William Mann, tinman, all of the city of New York, have invented, and made, and applied to use, certain new and useful improvements in the application of mechanical means to the camera used with the daguerreotype apparatus; such improvements effecting the taking representations of figures, buildings, scenery, or other objects of any kind in successive parts, each of which parts matches the precedent part on one plate, thereby avoiding distortion or disproportion of the parts (now caused in plates of more than certain sizes) by the divergent rays of the reflected light as they spread on the surface of the plate itself, and place portions of the objects represented either out of their true shape or proportionate position, or shew them with a blurred or faulty appearance; that our said improvements furnish means to use several cameras in succession, or one in a variety of elevations, so as to take a representation of a whole figure, building, scenery,
or other object, by means for which we seek letters-patent of the
233 United States, to be issued to the said Isaac Van Bunschoten, as the assignee of us, the said Isaac Van Bunschoten, John G. Woodbridge, and William E. Mann; and that the said improvements are collectively, constructively, operatively, and substantially set forth and shewn in the following description, and in the drawing annexed to, and making part of, this specification of our said improvements, wherein the Fig. 1 is a plan; the Fig. 2 is an elevation of the front or that part where the camera lenses are placed; the Fig. 3 is an elevation of the back of these parts, wherein the plates are adjusted for the required reflection to be received on them; and the Fig. 4 is a sectional elevation, taken through the line A B of the Fig. 1; the detached fig's are separately referred to, and the same letters and numbers, as marks of reference, apply throughout to the like parts in all the several figures.

In these C is a pedestal for two standards D D, which are made of a sufficient height to receive between them two or more carriages E E.

These are fixed on slide-clamps *a a*, having returned ends at the angles of the standards, and a screw 1, taking from one clamp through the other, to adjust them to any required vertical position. A hinge at the front end of each carriage sustains that end of the platens *b b*, and screw 2, acting through the carriage E, adjusts the platens *b b*
234 to any proper angle for the proper use of the camera boxes F F 1.

The fronts of these cameras are made as is now usual; the backs have slides *c* to receive a slide-frame *d*, whose length must be more, in proportion to the width, than is now commonly used, but, as a general rule, equal to all the collective height of all the camera boxes intended to be used; that is, if two cameras are to be used the slide *c* and frame *d* are to be twice as long as one box. If three cameras are used the length of the slide and frame is to be equal to three heights of boxes, and a like increase of length for each additional camera box; as the frame *d* carries the usual intermediate slide between the object and the daguerreotype plate, and is intended to receive in a rebate a plate of sufficient length to receive impressions, in successive sections, from each camera used in any given operation, and be kept in place by springs 3, within the slides *c*, as shown in the sectional elevation Fig. 4. In this mode of arranging the camera boxes the attached slides for the daguerreotype plate in the upper box F are made of an extra length upwards, above the box, to pass the plate in, so that the upper portion of the object to be represented is reflected on some given extent of the lowest portion of the plate. Below this box F, a camera box,
235 fitted either in the ordinary manner, or with slides extending both above and below the camera box, may be used to reflect the middle portion of the object on the corresponding part of the plate; but whether this be so done or not, the box F 1, is made with the attached slides *c* and springs 3 prolonged downwards below the camera box proper, so that the opposite end of the plate to that used in the box F can be put in to take the reflection of the lower part of the object in front of the camera.

To effect the "matching" of the successive reflected parts, the clamps *a a* and screws 1, enable the operator to adjust the heights of the carriages E, and the screws 2, and platens *b* serve to adjust the cameras on them, at the proper horizontal angle, to effect the operations intended.

To prevent the effect of any stray reflection upon the parts not intended to be first operated on, and also to prevent more reflection upon the parts of the representation already executed, there is placed behind the fixed and extra length of each back-plate of the slides *c* a side-plate *e*. The end of this, at the opening into the camera box, is made as a lip 4, that lies against and barely touching the slide-plate in the frame *d*, as seen best in Fig. 4, and the top or bottom of the box in which this slide-plate *e* moves (is fitted to pass a screw 5 into a nut on the slide *e*) to fit it accurately at the intended junction of the matching reflected parts on the plate in use, so as to cut off the light
236 from the other part of the plate. On the back of the slide-plate *e* a set spring 8, operating against the back side of the box, forces the front of the plate *e* against the fixed upper back-plate of the slides *c*, so as to retain the plat at the proper position in that direction; and on the back of the slide-plate *e*, at one or both sides, a small vertical spring 6 is so attached that the point turning under the plate, at one or both lower corners, comes out at either or each end of the lip to serve as a guage-point, entering ratchet-notches on the frame *d* that carries the daguerreotype plate. This furnishes an auxiliary or secondary means for adjusting

the daguerreotype plate, so that the successive reflections shall accurately match together. A small hook 7, lying behind the ratchet-spring 6, gives the means of drawing back the spring to move and adjust the frame *d*.

A variation in the mode of fitting the plate *e* is shewn in the detached Fig's 5, 6, and 7. In these Fig. 5 is a back elevation, Fig. 6 is an end elevation on that side of Fig. 5, and Fig. 7 is an opposite end elevation. *e* is the plate and 4 the lip, as in the former description; but instead of being made solid, as a part of the plate, as shewn in Fig's 3 and 4, the lip is made narrower, and may be varied in width, to suit the ob-
237 ject operated on, and is movable in a recess on the under edge of the plate *e*, with arms, one on each side the screw 5, and a notch on the outer side of each arm, taking a guide-stud *x* in each notch, and a two-part keeper-spring *q*, with the lower end against the movable lip, to keep that in place, so that it projects out towards the intermediate slide in the frame *d*. The points of the ratchet-springs 6, as in the former fig's, set into notches on the face of the frame *d*, as before described. And the effects of these parts, and the present described variations, are, that when the operator is adjusting the machine by the focus-glass, in the usual way, the lip 4 in both cases projects to cut off any upward or downward action of the reflected light; and when the machine is properly adjusted the focus-glass is withdrawn, and the frame *d* put in place, with the daguerreotype plate behind the side-plate, as usual; the top is then closed to shut off any light but that coming through the object-glass of the camera, and the slide in the frame *d* withdrawn; the daguereeotype plate then takes so much of the object to be represented as this machine is adjusted for; after which the daguerreotype plate is withdrawn, and placed successively into the next, or more camera boxes, to receive, in successive sections, the remaining parts of the objects to be represented.

238 We do not claim increasing the number of cameras as an invention; and we do not claim to have invented any of the parts described or used herein, irrespective of the particular manner in which we have so used them for these purposes, as all such parts, taken separately, are well known.

But we do claim as new, and of our own invention, and desire to secure by letters-patent of the United States, the application of the lengthened slide *c c*, either to act in opposite directions on one camera box, or on a plurality of camera boxes, for the purpose of taking daguerreotype representations in successive parts or sections, and effecting the junction or matching of successive sections by combining with the foregoing parts the adjustable lip 4, for the purpose of shutting off any stray reflections from the parts already operated on, while the next successive part is operated on, or of shutting off the stray reflections at the commencement from that part of the daguerreotype plate that is to be operated on after the first portion, substantially in the manner and for the purposes described and shown.

In witness whereof the parties to these presents have hereunto set their signatures this thirtieth day of June, in the year one thousand eight hundred and forty-eight.

ISAAC VAN BUNSCHOTEN.
JOHN J. WOODBRIDGE.
WILLIAM E. MANN.

Witnesses:
W'M SERRELL.
LEMUEL W. SERRELL.

239 At a special term of the circuit court of the United States of America for the northern district of New York, in the second circuit, held at the clerk office in Utica, on Saturday, the 31st day of July, in the year of our Lord one thousand eight hundred and sixty-nine:

Present, the Honorable Samuel Nelson, justice.

SIMON WING
vs.
CHRISTOPHER C. SCHOONMAKER. } In equity.

This cause having been duly brought to a hearing, & argued at the last October term of this court in the city hall, in Albany, by Mr, Cowen for complainant, & Mr. H. Baldwin, jr., for defendant, & due deliberation being had thereon, it is now here, on motion of Townsend & Brown, sol's for def'ts, ordered, adjudged, & decreed, & this court, by virtue of the power & authority therein vested, doth hereby order, adjudge, & decree, that the said complainant's bill, filed in this cause, be, & the same hereby is, dismissed, with costs.

Filed July 31st, 1869.

240 U. S. circuit court, north'n dist. of New York.—In equity.

SIMON WING, COMPL'T,
vs.
CHRISTOPHER C. SCHOONMAKER, DEF'T. } Commissioner's fees, &c.

Mr. C. C. Schoonmaker to John T. Lamport, DR.

1867 & 1868.

To services as U. S. commissioner as follows:

26 days' attendance in taking test'm'y for def't in above-entitled suit, *a* 3 00		$78 00
Taking 412 folios of testimony, *a* 20c. ea		82 40
Swearing & certifying oaths of 18 witnesses, *a* 25c. ea		4 50
Marking 35 exhibits, *a* 10c. ea		3 50
		168 40
Attorney's docket fee		20 00
" 25 depositions, 2 50 ea		62 50
Witnesses: Samuel J. Tompson, resides Albany, N.Y., 6 miles, 10 c'ts		60
Two days' attendance, 12		3 00
" Seth E. Parsons, Albany, N. Y., 6 miles, 10c		60
Two days' attendance, 12		3 00
" S. W. Pine, Syracuse, N. Y., 150 miles, 10c		15 00
Two days' attendance, 12		3 00
" Arthur Cobden, Troy, N. Y., 1 day attendance, 12.		1 50
" E. S. M. Harris, Albany, N. Y., 6 miles, 10c		60
Two days' attendace, 12		3 00
" C. C. Schoonmaker, Troy, 2 days' attendance		3 00
241 Witnesses: August Semen[en]dinger, New York City, 156 miles, 10c		15 60
" " " one day attendance		1 50

"	Henry J. Lewis, Greenpoint, N. Y., 160 miles, 10c	16 00
	One day attendance	1 50
"	Alexander Becker, New York City, 156 miles, 10c.	15 60
	One day attendance, 12	1 50
"	Rodney H. Dewey, Springfield, Mass., 110 miles, 10c	11 00
	One day attendance, 12	1 50
	George McGown Kingston, N. Y., 61 miles, 10c	6 40
	One day's attendance	1 50
"	Jas. B. Sinsabaugh, Geneva, N. Y., 202 miles, 10c.	20 20
	One day's attendance	1 50
"	W. O. Smith, Troy, N. Y., one day's attendance, 12	1 50
"	L. C. Everett, Troy, N. Y., 12	1 50
	Cha's Thayer, Braintree, Mass., 220 miles, 10c	22 00
	One day services	1 50
	Commissioner:	
	Frederick Seibert, Memphis, Ten., evidence taken by stipulation, 1 day att	1 50
	H. A. Balch	1 50
	H. Hesler, Chicago, Ill's	1 50
	Fee for taking Messrs. Seibert, Balch, and Hesler's evidence, as above, 23 folios, 20c. ea	4 60
	Swearing and certifying 3 depositions, 25c. ea	75
	2 days' comm'on's fees, 3 00	6 00
	Marking 3 exhibits, 10c	30
	Express charges on camera to Memphis and back	5 50
	" " " " from Chicago	1 00
	" book from Cambridgeport	31
242	Cartage on exhibits from court-room at Alb'ny, to express office	1 50
	Express to Cooperstown	2 00
	Filing papers at clerk office	5 50
	Other express at clerk office, printing 435 folios of evidence, (stipulated to be at 40c. ea)	120 00
		556 46

Costs stipulated at $556 46, as above.

MORTON & COWEN,
Att'ys for Complainant.

$556 46.

Costs taxed at five hundred & fifty-six $\frac{46}{100}$ dollars this 19th August, 1869.

A. A. BOYCE, *Clerk.*

Filed August 19, 1869.

243 Circuit court of the United States for the northern district of New York.—In equity.

SIMON WING
vs.
CHRISTOPHER C. SCHOONMAKER.

The bill of complaint in this cause was filed on the 24th day of Au-

gust, A. D. 1866, and the same day a writ of subpœna was issued, which was duly returned and filed on the 8th day of September, A. D. 1866. The defendant's appearance was entered herein on the 12th day of October, 1866, by Townsends & Brown, esq's, his solicitors. On the 22d day of May, 1867, the defendant filed his answer to the bill of complaint herein; and on the 24th day of May, 1867, the plaintiff filed his replication to such answer. Afterwards proofs were taken by the respective parties, and the cause brought on for argument before the Honorable Samuel Nelson, at the city of Albany, at the October term of said circuit court, A. D. 1869.

Afterwards, the following decree was made, filed, and entered
244 herein, dismissing bill of complaint, with costs:

245 And the said costs amount to, as hereby taxed, the sum of five hundred and fifty-six dollars and forty-six cents. Now, therefore, the said costs as taxed, together with the pleadings, proof, and papers herein, as required by the rules and practice of this court, are now hereby attached together, and the final decree is signed and enrolled according to law and the rules and practice of this court, on the 19th day of August, A. D. 1869, at the clerk's office of said circuit court, at the city of Utica, in said district, and judgment is docketed accordingly, and execution issued.

AUG'S A. BOYCE, *Clerk.*

Filed August 19th, 1869.

246 Circuit court of the United States in and for the northern district of New York, in the second circuit.

SIMON WING, APPELLANT,
vs.
CHRISTOPHER C. SCHOONMAKER, APPELLEE.

Whereas a decree was pronounced, filed, and entered in this cause on the 31st day of July, A. D. 1869, dismissing the plaintiff's bill of complaint herein, with costs:

Now, therefore, the said plaintiff, Simon Wing, considering himself aggrieved thereby, doth appeal from said decree, and [and] from the whole and every part thereof, to the Supreme Court of the United States.

E. COWEN,
Solicitor, & of Counsel for Appellant.

(Indorsed:) Supreme court of the United States. Simon Wing, appellant, vs. Christopher C. Schoonmaker. Appeal.

Allowed this 25th day of August, 1869.

S. NELSON, *Justice.*

Filed August 27, 1869. F. A. Woods, exd, Aug. 26, 1869.

247 UNITED STATES OF AMERICA, *ss:*

To Christopher C. Schoonmaker, greeting:

You are hereby cited and admonished to be and appear at a Supreme

Court of the United States to be holden at Washington on the first Monday of December next, pursuant to an appeal filed in the clerk's office of the circuit court of the United States for the northern district of New York, wherein Simon Wing is plaintiff, and you are defendant, to show cause, if any there be, why the decree in said appeal mentioned should not be corrected and speedy justice should not be done to the parties on that behalf.

Witness the Honorable Salmon P. Chase, Chief Justice of the Supreme Court of the United States of America, the 25th day of August, A. D. 1869.

[SEAL.] S. WILSON,
Justice of the Supreme Court of the United States.

248 NORTHERN DISTRICT OF NEW YORK,
County of Rensselaer, ss:

Esek. Cowen, of the city of Troy, in said county, being duly sworn, says that on the 26th day of August, 1869, he served the within citation on Christopher S. Schoonmaker, the defendant therein named, by delivering to him personally a true copy of said citation, and leaving the same with him, at the same time showing him the within original.

E. COWEN.

Subscribed & sworn to before me this 26th day of August, 1869.
JOHN T. LAMPORT.
United States Commissioner for North. Dist. of New York.

(Indorsed:) Supreme Court of the United States. Simon Wing, appellant, vs. Christopher C. Schoonmaker, appellee. Citation. E. Cowen, solicitor for appellant, Troy, N. Y.
Filed August 27, 1869.

249 Supreme Court of the United States.

SIMON WING, APPELLANT,
vs.
CHRISTOPHER C. SCHOONMAKER, APPELLEE.
} Appeal from the circuit of U. S., for N. D. N.Y.—In equity.

1866, Aug. 24th. Bill filed in circuit court.
1867, May 22nd. Answer filed.
May 24th. Replication filed.
1868 June 2nd. Proofs taked by each side.
1869, July 31st. Decretal order dismissing bill.
Aug. 19th. Decree signed & enrolled for costs of def't the appellee.
Aug. 27th. Appeal & citation & proof filed as allowed & annexed.

250 Supreme court of United States.

SIMON WING, APPELLANT,
vs.
CHRISTOPHER C. SCHOONMAKER,
Appellee.
} Appeal from the circuit court of the United States in and for the northern district of New York.—In equity.

I, Augustus A. Boyce, clerk of the circuit court of the United in and for the northern district of New York, do hereby certify & return that the preceeding is a true & correct transcript copy of the pleadings,

proofs, & decree as filed & entered of record in the above-entitled cause.

In testimony whereof I have hereunto subscribed my name & have hereunto affixed the seal of the said court at my office, kept by me, in the city of Utica, in said district, this 1st day of September, A. D. 1869, & of our independence the 94th.

[SEAL.] AUGUSTUS A. BOYCE, *Clerk.*

(Indorsement on cover:) No. 259. Simon Wing, appellant, vs. Christopher C. Schoonmaker. N. New York C. C. U. S.

Filed 29th September, 1869.

Supreme Court of the United States.

IN EQUITY.

SIMON WING,

APPELLANT,

vs.

CHRISTOPHER C. SCHOONMAKER.

APPELLANT'S BRIEF.

B. R. CURTIS,
CHAUNCEY SMITH,
Of Counsel.

BOSTON:
ALFRED MUDGE & SON, LAW PRINTERS, 34 SCHOOL STREET,
1870.

Supreme Court of the United States.

IN EQUITY.

SIMON WING,

APPELLANT,

vs.

CHRISTOPHER C. SCHOONMAKER.

APPELLANT'S BRIEF.

B. R. CURTIS,
CHAUNCEY SMITH,
Of Counsel.

BOSTON:
ALFRED MUDGE & SON, LAW PRINTERS, 34 SCHOOL STREET,
1870.

Supreme Court of the United States.

IN EQUITY.

SIMON WING, APPELLANT,

vs.

CHRISTOPHER C. SCHOONMAKER.

APPELLANT'S BRIEF.

THE bill in this case is filed against the defendant for the infringement of the reissued letters patent, granted to Albert S. Southworth, the alleged inventor, September 25th, A. D. 1860. The original patent was granted April 10th, A. D. 1855.

The bill sets forth a title in the plaintiff by assignment from the patentee, and alleges that the validity of the patent has been established in several suits in Massachusetts and in the Southern District of New York, and that the defendants have infringed the same, and it prays for an injunction and an account.

The answer denies the alleged infringement, and also that Southworth was the original and first inventor of the improvement described in the reissued patent, and alleges a prior knowledge and use by other parties.

The answer further alleges that the reissued patent is not for the same invention as the original patent, and is therefore void.

Upon the hearing the bill was dismissed and the plaintiff appealed.

I.

It is a matter of common knowledge that photographic pictures are taken by means of an instrument called a camera, which contains one or more convex lenses, through which the rays of light, coming

from the object of which a picture is desired, pass to the plate upon which the picture is to be taken. It is also well known that the plate upon which the picture is to be taken receives a chemical preparation, which is acted upon by light, and it is through this action that the picture is obtained. It is necessary, therefore, that after a plate has received this preparation, it should be excluded from all light, except such as comes from an object a picture of which is desired. The plate is therefore prepared in the dark and placed in a case, or shallow box, called a plate-holder, where it is completely cut off from the light by a slide or screen placed before it, which can be removed when the picture is to be taken.

This plate-holder can be placed in the camera in such a position that the image of the object formed at the focus of the lens will fall upon the plate when the slide or screen of the plate-holder is removed. It is well known, also, that an image is formed at the focus of a convex lens of the objects from which the rays of light proceed which pass through the lens; and to secure good photographic pictures, it is necessary that this image formed upon the plate should be well defined and free from distortion.

It is also a well known fact in physics, that a ray of light from any point which coincides with the axis of a convex lens, passes through the lens without deflection, while all other rays of light coming from the same point which fall upon the surface of the lens, are deflected from their course, and are bent towards the central ray, and come to a focus in the axis, and all such rays falling on the lens at equal distances from the central ray, will be equally bent or deflected, and will therefore meet on the opposite side of the lens at a common point in the axis or central ray, because they all fall upon the surface of the lens at the same angle.

But if the point from which the rays of light radiate is situated at one side of the axis of the lens, it is easy to see that the rays surrounding the central ray and at equal distances from it will not fall upon the surface of the lens at the same angle, and therefore will not be equally bent or deflected, and consequently will not meet the central ray at a common point. Any one who has observed the image of the sun formed by a common convex lens, when the rays from the sun pass through the lens parallel to its axis, and are received upon a plane surface parallel with

the plane of the lens, or at right angles with its axis, knows that the image so formed is round like the sun itself, and is perfectly well defined. And he also knows that if the lens be turned with respect to the sun the image becomes oblong, or oval, with its outline much less perfectly defined.

So also he has undoubtedly seen that the image of any other object, like the flame of a lamp, is clear and well defined with its true shape and proportions, when the lens and the surface upon which the image is formed are so placed that the image is formed in the axis of the lens and upon a surface at right angles to it, while the image becomes distorted and ill defined if the lens and surface are turned askew to the object.

In taking photographic pictures, it is of the first importance that the pictures should be clear and well defined, and free from distortions, especially where the pictures are likenesses of persons. It is easy to see, therefore, that in taking such pictures, it is of the highest importance that the lens and the plate upon which the picture is taken should be placed in such a relation to the object as to secure the most perfect image, *i. e.* that the rays from the object should be brought to a focus in the axis of the lens, and that the plate should be at right angles with the axis. Any departure from these conditions will render the pictures more or less imperfect. This fact is testified to by the celebrated manufacturer of optical instruments, Mr. Alvin Clark, pages 24, 25, and 27, and the reasons fully are explained.

II.

Nature and Object of Southworth's Invention.

When but a single picture is to be taken upon a plate, the camera is pointed directly to the object of which a picture is to be taken, so that the point which is to form the centre of the picture coincides with the axis of the lens, and the plate is so placed in the plate-holder and camera that it is at right angles to the axis of the lens, and its centre coincides with that axis. This secures the best conditions for the picture, the conditions explained above, and testified to, and more fully explained by Mr. Clark.

The picture in such case is made in the centre of the plate. But where several pictures are wanted upon one plate, there must be some arrangement which will enable the operators to throw the image upon different portions of the plate without exposing it to the light.

Southworth testifies that before making this invention he was acquainted with and used, in common with other photographers, a method which he describes on pages 45 and 46. Ints. 35, 36 and 37. It consisted in swinging the camera to one side or the other, so that the image was thrown to one side of the axis of the lens. In doing this the lens and plate were both turned with the camera, and thus while they were kept in the same relation to each other, their surfaces were placed at a different angle to the rays of light coming from the object.

By this method, some or all of the pictures upon a plate would be more or less distorted, in the manner shown by the pictures of three globes marked "Exhibit E," and testified to by the appellant. Pages 53, 54 and 55.

The pictures will also have other imperfections which are particularly pointed out by Mr. Clark. Pages 24 and 25, ints. 11 to 18.

The object of Southworth's invention, was to provide the means for taking several pictures upon one plate free from this distortion and these imperfections.

This object he accomplished, by so constructing the camera or plate holder, that the relative position of the plate to the lens could be changed, instead of changing the angular relation of the camera, with the lens and plate, to the object.

In other words, instead of swinging the camera so that for each picture it stood at a different angle with respect to the object, and the rays of light from the object fell upon the surfaces of the lens and the plate at a different angle, making each picture differ from the others, he kept the camera in the same position, and moved the plate in the camera so that a fresh portion was brought into the focus of the lens, without changing the angle at which the rays of light fell upon the plate or the lens.

It is obvious, however, that instead of moving the plate in the camera, the lens may be moved so as to carry its focus to a fresh portion of the plate without changing the relation of the camera to the object,

and without changing the angle at which the light from the object falls upon the lens and the plate.

This Southworth did in fact do.

In both the original and reissued patents the invention is called a new and useful plate-holder for cameras. Pages 55 and 58.

The specification of the original patent commences with the statement that the inventor "has made a new and useful plate-holder for cameras for taking photographic impressions." The object of the invention is thus set forth: "In taking daguerreotypes of small si e for lockets, it often occurs that the first picture taken is not properly timed, or exposed to the light, and a second or third is required to be taken before a perfect picture is obtained; each picture thus taken requires a freshly prepared plate, which causes a considerable consumption of time.

"The object of my invention is to bring in rapid succession different parts of the same plate, or different plates, of whatsoever material, prepared for photographic purposes, into the centre of the field of the lens for the purpose of either timing them differently, that the most perfect may be selected, or of taking different views of the same object with the least delay possible, or of taking stereoscopic pictures upon the same or different plates with one camera.

"My invention consists in a peculiarly arranged frame, in which the plate-holder is permitted to slide, by which means I am enabled to take four daguerreotypes upon one plate, and at one sitting, different portions of the plate being brought successively opposite an opening in the frame, the opening remaining stationary in the axis of the camera while the plate-holder and plate are moved." Page 56.

The specifications of the reissued patent commences with the statement that the inventor has "invented certain improvements in taking photographic impressions," and the object of the invention is set forth as follows: "In taking daguerreotypes, photographs, &c., it has been customary to use a separate plate for each impression, the plate being removed from the camera and replaced by another, where several impressions of the same object were to be taken, as in multiplying copies, or for the purpose of selecting the best toned pictures; this caused considerable delay and trouble, to obviate which is the object of my present invention, which consists in bringing successively different portions of the same

plate, or several smaller plates secured in one plate-holder, into the field of the lens of the camera.

In carrying out my inventions, I have made use of a peculiarly arranged frame in which the plate-holder is permitted to slide, and in which the positions of the plate-holder is definitely indicated to the operator, so that he can quickly and accurately adjust the plate or plates." Pages 58, 59.

Following these passages there is in the specifications of both the original and reissued patents, a description of the apparatus in the same language and following the description, each specification contains, among other things, the following passages:—

"I am thus enabled to take four impressions upon different portions of the same plate. These may be miniatures of the same person taken as before stated, for the purpose of selecting the best for a locket, or they may be different views of the same face taken upon the same plate for the purpose of preserving them together; or they may be daguerreotypes of different persons, as different members of a family; or, lastly, stereoscopic pictures may be thus taken with a suitably arranged camera.

"It is evident that as the frame A B remains stationary, the opening C, when once placed in the axis of the camera will not change, and the successive pictures will all be taken with equal correctness; and the changes are so quickly made that the aperture of the camera need not be covered from first to last, unless different positions or different objects are taken."

The reissued patent contains the following statement not found in the original. "It is evident that my improvement may be embodied, by causing the lens of the camera to be made adjustible in different positions with respect to the plate, while the plate remains stationary, so that different portions of the plate may be brought into the field of the lens; this I have tried, but do not consider it so good a plan as the foregoing, as it necessitates a change of position of the camera itself or of the object."

No evidence has been offered to show that this additional statement of the scope of the invention, or of the mode of carrying it out is not correct, or that there is any substantial difference between the plan here suggested and that originally described; and we shall proceed to show that

Southworth did in fact invent both methods of applying or carrying out his invention, and that he had the same object in both, and secured the same results.

III.

History of Southworth's Invention.

In August, 1846, Mr. Southworth was in Thetford, Vt., and while there, he gave an order to Mr. Ethan N. Coburn to make a camera of peculiar construction, for the purpose of making pictures more rapidly than one at a time. This camera was to be made with wings, so that the plate might be longer than usual, and be screened from the light while in a frame. Mr. Southworth did not at this time give any directions about the frame for holding the plate, leaving that, as he says, for a future opportunity. This camera or box, as it is often called, was made by Mr. Coburn, and sent to Boston in November following. It has been produced as an exhibit in the case marked "A 1."

Mr. Southworth's testimony to the above fact is found on pages 40 and 41 of the record, in answer to int. 6.

Mr. Coburn has been examined as a witness, and he testifies that he made the box in the fall of 1846; that he received instructions to make it in August of that year, at Thetford, from Mr. Southworth, and that he sent it to Mr. Southworth, in Boston. He thinks he sent it in a month or six weeks after receiving the order to make it. Mr. Coburn himself came to Boston in the following April, and has not lived in Thetford since. Pages 28, 29, and 30.

Mr. Josiah J. Hawes, a former partner of Mr. Southworth's, identifies the camera as one that came to their rooms in Boston, with other goods, in a box from Vermont. Page 31, int. 7.

He thought at first it came there in 1847, but afterwards fixes the time in 1846. Page 33, ints. 23 to 27.

Mrs. Hawes, the wife of the witness last mentioned, and the sister of Mr. Southworth, testifies that she was in Thetford with her brother in August, 1846, and that Mr. Coburn was also there; she fixes the time definitely by a letter in her possession at the time of giving her deposition, written to her husband from Thetford, and dated August 22d, 1846, in which she speaks of her brother as then in Vermont. She recognizes

Exhibit "A 1" as having come to the rooms of her husband and brother in a box with other cameras from Vermont; she thinks in November, 1846.

There can be no room to doubt that Mr. Southworth and Mr. Coburn were both in Thetford, Vermont, in August, 1846; that Southworth then gave Coburn the order to make Exhibit "A 1," and that Coburn made it and sent it to Southworth, in Boston, in November of the same year.

The making of this camera fixes the date of the conception of the invention by Southworth, and the first step towards reducing it to practice.

This instrument, however, was never completed and used; and we do not claim that the invention was actually reduced to practice in it. It is important to notice, however, one circumstance about it. It is obvious from inspection, that the design was to move the plate in the instrument, the wings being provided to allow this to be done.

Pursuing the history of the invention, Mr. Southworth says, "on examining this piece of work," [Exhibit A 1,] "taking time to think it over, I saw that to use this fashioned instrument, and furnish them, would require all new cameras, and I desired to make in a cheap manner my idea of multiplying pictures; at a convenient time after this I employed Mr. Stewart to alter one of my old camera boxes to multiply pictures so as to accomplish the same idea."

In this camera, altered by Mr. Stewart, the plaintiff claims that Mr. Southworth completely reduced his invention to practice; and we, therefore, ask particular attention to this part of the evidence.

Parts of this instrument, made under Mr. Southworth's direction by Stewart, have been produced in evidence, and are marked as Exhibits B 1 to B 5, inclusive.

It is important to observe that in this instrument, instead of moving the plate while the lens remained stationary, Mr. Southworth moved the lens and allowed the plate to remain stationary. In this respect this instrument differed from Exhibit "A 1," and also from the form in which the invention is shown and described in the patent. This method of

carrying out the invention, is that which in the reissued patent is suggested at the end of the specifications as an alternative method of carrying out the invention.

The substantial identity of these two methods of carrying out the invention we shall consider hereafter. At present we are merely endeavoring to ascertain what Mr. Southworth did in fact do, and the time when he did whatever he did do.

Mr. Southworth states positively (page 41, int. 6) that he employed Stewart to alter an old camera box to multiply pictures. In answer to int. 9 he says, Stewart did make the alteration, and in response to interrogatory 10, he identifies the Exhibits B 1 to B 5 as parts of the instrument when altered. In his answers to ints. 12, 13, and 14, page 42, he explains the several parts and the mode of using the instrument. In reply to ints. 15 and 16, he states that he actually used the instrument so as to *prove it was a success*, and gives particular instances when it was used, viz.: in making a picture of the young ladies in a school in South Boston, of the family of a merchant on Milk Street, and of parties in his own rooms.

Mr. Hawes, on page 32, in answer to interrogatories 13 to 17, identifies the parts of the instruments which have been produced as exhibits; he says he "recognizes them as parts of an apparatus made at our rooms, No. 19 Tremont row; I should say in 1847." The object of the instrument he says was "for making a number of images on the same plate, by moving the lens over the plate." "It was actually used by Mr. Southworth himself." "It was used a number of months in our rooms at different times, but I can't specify the times exactly; it was in usable order until he" (Mr. Southworth) "went to California, which was in 1849. He says that the subject of taking a patent was talked over between Mr. Southworth and himself, and he thinks he rather dissuaded Mr. S. from taking a patent then, as there was not interest in the matter to make it pay in his mind.

In answer to int. 19, he says he thinks the instrument remained in a condition to be used till 1862 or 3, when he took the front off.

On page 34, in answer to cross-interrogatory 1, as to how long the instrument continued to be used or was in a condition to be used, he says, that though he can't fix the date positively, he knows it was in a usable condition for a number of years.

Mrs. Nancy Hawes, the wife of the last-mentioned witness, and the sister of Mr. Southworth (page 38, int. 16), recognizes the exhibits as "parts of a camera used for making several heads on one plate." She remembers several instances when it was used, and says "it was often used to her knowledge; occasionally used, but not uniformly." She fixes the time as 1847, when the instrument was made, by the circumstance that pictures were made by it, she thinks, for the mechanics fair, which was held in Boston in the fall of that year.

Her answer, on page 39, to an interrogatory on the re-direct examination, shows that she had taken pains to fix her dates positively, by an examination of account-books and letters of that period.

We thus prove, by four witnesses, the making of Exhibit A in 1846, and the making and using of the second instrument, Exhibits B 1 to B 5, by three witnesses.

Finally, the exhibits themselves are evidence that the invention was reduced to practice in them, for they contain all that it is necessary to add to an ordinary camera to carry out this invention. We have a piece for holding a lens evidently made to place the lens in different positions, and we have diaphragms, or screens, to be placed before the plate on which the pictures are taken, so constructed that each quarter of the plate can be exposed to the action of the light in whatever position the lens is placed, while the other three-quarters are screened from the light; and that is all that is required for reducing the invention to practice. A lens adjustable to different positions and screens, by which a portion of the plate corresponding to each position of the lens can be exposed to the light without exposing the other portions, embraces the whole invention. And all this Southworth had and used in a working camera, and he brings the parts before the Court.

The defendant has offered no evidence to rebut the evidence of these witnesses, or to throw any doubt upon the accuracy of their statements; and we submit that it is established beyond doubt, that the apparatus of which B 1, B 2, B 3, &c. are parts, was an apparatus for taking sev-

eral pictures on a plate, each in the axis of the lens, and all equally perfect; that it was constructed in the early part of 1847, and was used successfully as occasion required for several months, and perhaps years, and was certainly in a usable condition for years.

Had not Southworth then made an invention? Had he not reduced a conception or idea to practice and entitled himself to a patent, whenever he should make the proper application? As the result of study, labor and trial, he had made a working instrument and used it, enough at least, to use his own language, "to prove it was a success." What more does the law require?

But though he had, as we contend, reduced his invention to practice and used it in his own establishment, yet he did not then apply for a patent; and the reason he assigns for not doing it on page 43 of the record, int. 22, is, that he had not perfected the mechanical details to his satisfaction; he wanted rest from eight or nine years constant study and occupation, and he therefore went to California, where he staid two years; on his return his health was impaired, and he was occupied with improvements of the stereoscope till he was taken sick and confined to his room, when he applied himself "to finish his idea of taking pictures rapidly in the centre of the lens, by adapting the movement in a frame which would fit any ordinary camera." The date of this last improvement he fixes on page 51, cross int. 19, in the fall of 1854; and no evidence has been offered to show that this is not the true time, and as the patent was granted in April, 1855, it is obvious that it could not have been much later.

It is the form of the invention which he gave to it at this last date which he described in the patent.

It is important to observe here that the history of the invention presents three stages.

1st. The first stage is that shown by Exhibit A. 1, which shows the original conception embodied in a camera of peculiar construction to allow the plate to move. But Southworth says (page 41, int. 6), that on examing this piece of work he saw that this fashioned instrument "would require all new cameras, and he desired to make in a cheap manner his

idea of multiplying pictures," and shortly afterwards he employed a man named Stewart, *to accomplish the same idea*," by altering a box.

2d. The second stage in the carrying out of the same idea, is shown in Exhibits B', B" etc., where the end is secured by altering an old box so as to make the lens adjustable.

3d. The third and last stage is shown in Exhibit C, where Mr. Southworth returning to his first idea of moving the plate and following out his desire to put the invention into a cheap form, embodies it in a peculiar plate-holder, which could be applied to any camera without change.

The instrument representing the first stage of the invention, that made by Coburn, marked Exhibit A 1, was made in 1846, and was never completed so as to be used.

Exhibits B 1, B 2, etc., representing the second stage of the invention, that form in which the lens is moved, was made in the spring of 1847, and put into use. Exhibit C represents the third step taken by Mr. Southworth, in November, 1854, and that form of the instrument described in the patents.

The question now arises, whether the instruments representing the second and third steps taken by Mr. Southworth, in pursuit of the same object, both embodied the same invention, and whether that invention takes date from the first of these working instruments.

The first observation to be made upon this question is, that though the reissued patent contains a statement which the original does not, that "it is evident that my improvement may be embodied by causing the lens of the camera to be made adjustable in different positions with respect to the plate while the plate remains stationary, so that different portions of the plate may be brought into the field of the lens;" and though the answer alleges that the reissued patent is not for the same invention as the original, yet the defendant has introduced no evidence to show, in support of this allegation, that the moving of the lens instead of the plate embodies a substantially different invention, or a substantially different mode of operation.

Neither has he offered a word of testimony to prove that the apparatus, of which Exhibits B 1, B 2, etc., are parts, was substantially different from that described and represented in the drawings of the reissued patent. There has been no lack of expert testimony on behalf of the defendants to prove the substantial identity of the instruments brought forward as anticipating the patented invention with that described in the patent, but no witness has attempted to show any substantial difference between the moving of the plate and the moving of the lens.

The plaintiff, on the contrary, has offered direct testimony to the fact that these two modes of construction are substantially the same. Mr. Hawes testifies (page 32, int. 14) that the object of the apparatus, of which Exhibits B 1, B 2, etc., were parts, was the making a number of pictures on the same plate by moving the lens over the plate; and in answer to interrogatory 20, he says that he should consider the principle and result of that apparatus the same with that of the machine described in the original patent.

One of the defendant's own witnesses, Seth E. Parsons, who is brought forward as an expert, testifies most explicitly t[illegible] substantial identity of the two forms of the instrument. Pages 82 [illegible] answer also virtually a[illegible]

The next observation to be made upon the instrument constructed and used by Southworth in the spring of 1847, is, that it was designed to be used and was used for the same purpose as the instrument described in the patent, viz.: to take several pictures upon a single plate, and that the pictures were all taken in the axis of the lens, and were therefore taken under the ordinary conditions in which pictures were taken. The pictures were therefore free from distortion.

We have, therefore, the same object or result in the instrument of 1847 as in that described in the patent. We have also in both, the two most important conditions for attaining this common object, viz.: the taking of the pictures in the axis of the lens, by which condition their perfection was secured, and the facility for making the changes for taking the successive pictures.

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The instrument representing the first stage of the invention, that made by Coburn, marked Exhibit A 1, was made in 1846, and was never completed so as to be used.

Exhibits B 1, B 2, etc., representing the second stage of the invention, that form in which the lens is moved, was made in the spring of 1847, and put into use. Exhibit C represents the third step taken by Mr. Southworth, in November, 1854, and that form of the instrument described in the patents.

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One of the defendant's own witnesses, Seth E. Parsons, who is brought forward as an expert, testifies most explicitly to the substantial identity of the two forms of the instrument. Pages 82, 83, ints. 30 and 31.

answer also virtually admits their identity Page 5

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We have, therefore, the same object or result in the instrument of 1847 as in that described in the patent. We have also in both, the two most important conditions for attaining this common object, viz.: the taking of the pictures in the axis of the lens, by which condition their perfection was secured, and the facility for making the changes for taking the successive pictures.

The difference between the two instruments was this: that in the apparatus described in the patent, the plate upon which the pictures were to be taken was changed in its position so as to bring different portions of it successively into the axis of the lens, the lens remaining stationary; while in the instrument of 1847, the lens was moved so as to bring its axis successively over different portions of the plate, the plate remaining stationary. If the lens is moved, it must have precisely the same extent of movement as the plate has if that is moved; that extent of movement is in both cases the distance between the successive pictures. In addition to this, it must be remembered that while the relative position of the lens and plate was changed for each picture, their angular relation to the object remained the same. In both ways, the causes which produced imperfect or distorted pictures were avoided in the same way.

The identity of the invention embraced in the instrument constructed and used by Southworth in the fall of 1846 or spring of 1847, with the invention described in the patent, is made apparent by the history of the invention. This history shows that Southworth treated the movement of the lens and the movement of the plate as simply two modifications of the invention; two plans for carrying out the same idea, the choice of one or the other being determined by considerations having reference solely to economy of construction.

In the incomplete instrument made by Coburn in Vermont in 1846, we have his earliest conception of the invention, and his first step to reduce it to practice. In this instrument, the lens was to remain stationary, and the plate was to be moved. Southworth's deposition, page 40, int. 6. and page 44, int. 27.

But he tells us in his answer to int. 6, that, on examining this instrument when it was brought to him by Coburn, and taking time to think it over, he saw that to use this fashioned box would require all new cameras, and he desired to make, in a cheap manner, his idea of multiplying pictures; and at a convenient time after this, he employed a Mr. Stewart to alter one of his old camera boxes to multiply pictures so as accomplish the same idea. This was done in the instrument, parts of

which are produced, marked as exhibits B 1 to B 5, inclusive. Page 41, ints. 9, 10, 11, 12.

Is it not clear that in the instrument made by Stewart, Southworth was carrying out the same idea which he commenced to embody in the first instrument made by Coburn? In these two instruments was he making two inventions, or one only? It is clear that he thought he was making but one invention. It is clear also, that he thought he had reduced the invention to practice in the instrument altered by Stewart, of which Exhibit B 1, to B 5, are part. Page 42, ints. 15 and 16.

Observe, now, that he commenced his attempt to carry out the invention by an instrument in which the plate was to be moved, and that he went to a plan in which the lens was moved because, according to his first plan, an entirely new camera box would be required, but in the second plan it would only be necessary to *alter* existing instruments.

But this second plan embodied the invention just as completely as the first plan would have done if he had completed the Coburn instrument; just as completely as it did when he afterwards constructed an instrument for holding the plate and allowing it to move, which could be used with the cameras then in use without any alteration whatever. For this is just what he afterwards did do, and all that he did in 1854, when he devised the means of applying the invention to any ordinary camera. Page 43, ints 22, and page 44, ints. 26 and 28.

It is clear, from Southworth's statements, that historically, both the plans adopted by him relate to the same invention, and that the invention was completely reduced to a working shape in the spring of 1847.

Now, if he actually made what he and the other witnesses say he did, in 1846 or 1847, and used it in taking pictures, did he not "reduce the invention to practice," within the strictest meaning of that phrase? Could he not have applied for a patent at that time and made oath that he had made a new and useful invention? And is he not entitled to take that time as the date of his invention, notwithstanding he subsequently made an improvement?

Because he made an improvement upon his own invention before he

applied for a patent, and described his invention in that improved form when he did make his application, is he to be treated as not having before reduced the invention to practice? Suppose that he had not made the improvement, but had, when he made his application in 1854 or 1855, described the invention in the form shown in Exhibits B 1, &c., clearly the date of his invention would then have been the spring of 1847. Is he to be placed in a worse condition because he has improved his own invention and described the invention in its improved form?

The rule applicable to such a state of facts, is thus stated by Lowell J., in a charge to the jury in Woodman *vs.* Stimpson, on page 105, 3 Fisher.

"Another point which I have not before seen in the precise way in which I am about to put it, is the principle of law which is to govern you in determining the time when this invention was made. For the purposes of this case, I shall rule that the principle of law is, that he is the original and first inventor of a machine, or combination, or whatever it is, if it was not known or used by others before his discovery or invention, — the man who has made an invention that was not known before he made it. *That does not mean that he got his machine into the complete state in which you find it in the patent.* Neither does it mean the first moment at which he conceived the idea that it would be a good thing to do that. It means not only when he conceived that such a thing would be a desirable thing to do, but when he had conceived how to do it substantially as he has done it."

See also Mowry v. Lockwood 8 Wal 2

IV.

Infringement.

This is testified to by Charles G. Hill. Pages 11, 12, 13, and pages 18, 19, and 22.

The description given by this witness, of the mode of using the defendant's camera, and the results obtained, show fully that he is an infringer.

Indeed the defendants have not attempted to show that the instruments used by them, as testified to by Hill, is not an infringement. He tacitly admits that he is an infringer. He has not attempted to show

that there is any view which could be taken of this invention under which he could contend that he was not using it.

V.

DEFENCES. — WANT OF NOVELTY.

The defendant, in his answers, sets up a prior knowledge of the invention by other parties before the invention thereof by Southworth, and so far as can be gathered from the evidence, this is the only defence relied upon.

If Southworth reduced his invention to practice in the year 1847, then it becomes necessary to consider only those alleged inventions which were made in or before that year.

There are but two of these: one is represented by Exhibit O, Schoonmaker; the other is described in a patent granted in 1849, to Van Bunschoten, Woodbridge and Mean, and is represented by Exhibit V.

In regard to the latter instrument, we claim, 1st, that it does not embrace Southworth's invention; and 2d, that there is no sufficient evidence that the instrument was constructed or invented prior to Southworth's invention. 3d that the answer contains

The only evidence as to the time when this invention was made, is the statement of Henry J. Lewis, on page 108, that he constructed the experimental camera for the inventors before they took out their patent, and he thinks he did this in 1847, but says it might possibly have been in 1848. This Court will not declare a patent void merely upon the recollection of a witness who thinks he made an instrument in 1847, but who admits that he might have done it the following year. Even if the instrument had been made in 1847, it might have been, and probably was made subsequent to the date of Southworth's invention. For Southworth's instrument, marked Exhibits B 1, etc., was made in the early part of 1847.

But it is obvious upon the face of the patent itself, that it is for a different invention from Southworth's. The specification is to be found on page 139 of the record, and contains this statement of the nature of the invention: "Know ye that we, Isaac Van Bunschoten, &c., have invented and made, and applied to use, certain new and useful improvements in the application of mechanical means to the cameras used with

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The only evidence as to the time when this invention was made, is the statement of Henry J. Lewis, on page 108, that he constructed the experimental camera for the inventors before they took out their patent, and he thinks he did this in 1847, but says it might possibly have been in 1848. This Court will not declare a patent void merely upon the recollection of a witness who thinks he made an instrument in 1847, but who admits that he might have done it the following year. Even if the instrument had been made in 1847, it might have been, and probably was made subsequent to the date of Southworth's invention. For Southworth's instrument, marked Exhibits B 1, etc., was made in the early part of 1847.

But it is obvious upon the face of the patent itself, that it is for a different invention from Southworth's. The specification is to be found on page 139 of the record, and contains this statement of the nature of the invention: "Know ye that we, Isaac Van Bunschoten, &c., have invented and made, and applied to use, certain new and useful improvements in the application of mechanical means to the cameras used with

the daguerreotype apparatus, such improvements effecting the taking representations of *figures, buildings, scenery, or other objects of any kind in successive parts*, each of which parts matches the precedent part on one plate (now caused in the plates of more than certain sizes) by the divergent rays of the reflectors as they spread on the surface of the plate itself, and place portions of the objects represented either out of their true shape or proportionate position, or show them with a blurred and faulty appearance."

The description shows a complicated apparatus involving the use of two or three cameras, and bearing no resemblance to any thing described in Southworth's patent; and the claim shows conclusively that the invention was entirely different from that of Southworth's. The claim is as follows: "We claim as new and of our invention, and desire to secure by letters patent of the United States, the application of the lengthened slide, cc, either to act in opposite directions on one camera box, or on a plurality of camera boxes, for the purpose of taking daguerreotype representations in *successive parts or sections, and effecting the junction or matching of successive sections*, by combining with the foregoing parts the adjustible lip 4, for the purpose of shutting off the stray reflections from the parts already operated on, while the next successive part is operated on, or of shutting off the stray reflections at the commencement, from that part of the daguerreotype plate that is to be operated on after the first portion 'substantially in the manner and for the purposes described and shown.'"

It needs no argument to show that the above claim is for something entirely different from Southworth's invention. It is for taking pictures in parts or sections, and for placing or matching the parts or sections. Southworth did not take pictures in parts or sections, but took distinct pictures on the same plate, each picture separate from the others.

The witness Lewis, who made the Exhibit V, testifies that the two inventions are the same in principle, and he produces three pictures on one plate, which he says he made by the exhibit; but he admits on cross-examination (page 111, cross-int. 16), that no such method of taking pictures is described in the specification as that which he produced in taking the pictures he produced. All that the testimony of the witness amounts to at the most is, that now, with Southworth's invention before him, he is able to operate the instrument in a way not described in the

Van Bunschoten patent, and to produce three pictures on a plate. In doing this he discards the plurality of cameras, or the means for moving a single camera described in that patent. In other words, having been taught by Southworth how to dispense with certain parts of the apparatus, and how to operate the remaining parts in a manner different from that described, he is able to obtain in an experiment the same result as Southworth. But there is not a word of evidence to prove that this Exhibit V operated in the way described by the witness would be of any practical value for the purposes of Southworth's invention. To invalidate Southworth's invention, it must at least be shown, not only that another instrument can be used to take two or more pictures on a plate under the conditions found in Southworth's instrument, but that it could be done with practical success.

This has not been done. We submit, therefore, that the defendant has failed to prove, either that this invention was earlier than Southworth's, or if Southworth's invention must be considered as not reduced to practice till 1854, that this instrument, Exhibit V, contains a successful reduction to practice of Southworth's invention.

Sinsabaugh's Apparatus. Exhibit O.

All the other evidence relied upon to prove that the invention claimed in the patent was known and used by other persons than Southworth, prior to the spring of 1847, relates to "Exhibit O, Schoonmaker." The only witness who claims to have used or known an instrument like this, prior to that time, is J. B. Sinsabaugh, of Genesee, N. Y. He does not produce the instrument which he used at that time, but he produces two plates, one having two pictures on it, the other four, which he says were made on an instrument which agreed exactly with Exhibit O. One of these plates is marked Exhibit No. 3, Schoonmaker, and has upon it two pictures which he says were made in the fall of 1846. The other plate is marked Exhibit No. 4, Schoonmaker, and has four pictures on it which the witness says were made with the same instrument as No. 3 was, but he does not tell when they were made. He states, however, in answer to int. 12, page 121, that he made others in the same manner, and sold them, for a short time after he made No. 3.

In answer to cross-int. 2, page 121, he says he cannot tell how many pictures he made in that way, and sold; but he made but *very few*. He

also says he made no more, because it was *so much trouble to make them, and the pictures were so uncertain.* Cross-int. 4, p. 121. And in answer to cross ints. 4 and 5 (page 121), he says *the pictures were frequently imperfect,* and he gives the reason why. This limited use was all the use he ever made of the instrument, although it has been in his possession ever since, until about three years before he testified. In answer to cross-int. 4, page 121, he says the pictures were imperfect, because in sliding the plate-holder, he would sometimes slide or move the box, and sometimes push the plate-holder, so that the light would strike over on to the picture already made; and by reason of this, he admits (cross-int. 5) that his pictures were frequently imperfect. In re-examining him (page 122), the defendant's counsel suggests a mode of obviating these evils; but the witness says, in answer to int. 3, the remedy suggested would remove the difficulty in *part only;* and then reiterates emphatically that he did not get perfect pictures, and could not; and he goes on to say that if others could, they were more successful than he was. The witness also admits, in his cross-examination, that in taking pictures, the images were thrown on to one side of the ground glass, while the sitter was placed not in front of the glass, but at one side. This was another defect in the instrument.

Clearly, all that this witness did, is, in the eye of the law, nothing more than an abandoned experiment. He modifies a camera for the purpose of taking two or more pictures on a plate, and attempts to use it, but he finds a difficulty which renders it uncertain in its results, and which frequently makes his pictures defective. He never overcomes this difficulty, and he therefore abandons the instrument after making a *very few* pictures. We submit that no patent was ever held to be void upon such a state of facts.

Southworth overcame all the difficulties which Sinsabaugh encountered but failed to overcome; Southworth devised means to take good pictures with certainty and without trouble, where the other man takes them with so much trouble, and with such uncertainty as to their perfection, that he gives up the attempt altogether. The evidence shows that nearly all the photographers in the country use Southworth's invention. There is no evidence, there is no pretense even, that anybody now uses, or desires to use, Sinsabaugh's apparatus. Nobody thinks of using an apparatus in which the sitter must sit askew to the instrument

so as to throw the image to one side of the axis of the lens. No one would think of using an apparatus so constructed as to be constantly liable to make the pictures overlap each other. And yet this is what Sinsabaugh did, and just what Southworth did not do. And by reason of the difference in what they accomplished, all photographers use Southworth's apparatus, while nobody, not even Sinsabaugh himself, uses the apparatus of the latter.

In addition to all this, the instrument did not provide for taking the pictures in the focus around the axis of the lens, and therefore did not contain one of the most essential features of Southworth's invention. This clearly appears from his answer to the 10th, 11th and 12th cross-interrogatories (page 122), where he states explicitly that the person of whom a picture was to be taken was not placed in front of the lens, but at a little to one side.

Southworth testifies, as an expert (pages 46 and 47, ints. 38, 39, 40, and 41), that Exhibit O does not contain substantially his invention, and he explains the reasons fully.

So also Mr. Clark testifies that this instrument is different from Southworth's, giving reasons that are conclusive. Page 24, ints. 6 to 14.

There are other witnesses who testify to the use of an apparatus like Exhibit O, but none of them fix the date earlier than 1848. These witnesses are S. J. and the defendant himself.

Thompson, when first examined, merely testified that in the fall of 1847, he was acquainted with a mode of making more than one picture on a plate by means of a sliding plate-holder. Page 70, int. 5. When called a second time he testified that Exhibit O was the same in construction and principle with the apparatus he used in 1847. Page ~~44~~ 96 int. 1. He does not however attempt to fix the date earlier than the fall of 1847, some weeks after September. Pages 98, cross-ints. 3 to 11. This was several months later than the time when Southworth made his first instrument, of which Exhibits B 1 ~~and C~~ 4 C, are parts. The defendant testifies (page 110, ints. 9 and 10), that in the winter of '48 '49, Thompson explained the method of taking more than one picture on a plate, but he does not say that he then saw an instrument like Exhibit O. Whatever he saw, it was more than a year after Southworth's invention.

If, as before observed, we are correct in assuming that Southworth's invention was made in the spring of 1857, then we are not called upon to consider any other evidence of prior invention offered by the defendants, because it all relates to what is subsequent. But we claim that even if Southworth is not allowed to carry his invention back of the time when he made his last improvements, viz., the fall of 1854, there is no sufficient evidence that he was anticipated in his invention. We claim that the apparatus testified to by a number of witnesses did not contain the invention because the pictures were made on different parts of the plate, not by changing the relative position of the plate and lens as by Southworth's invention, but by turning the camera askew to the object as in Sinsabaugh's apparatus, Exhibit O. And as to all the other evidence, we claim that it is insufficient to establish the alleged invention in fact, or the dates assigned to them.

We shall first consider the first class of cases.

EVERETT'S APPARATUS. EXHIBIT O.

Another witness, Lorenzo C. Everett, also testifies to the use of an instrument like Exhibit O, at Townsend, Vermont; but he fixes the date in 1848, too late to antedate Southworth's invention, even if the instrument embodied the invention. Pages 124, 125.

It is a circumstance deserving of note, that though several witnesses testify to using such an instrument independently, and at different places, neither one of them can produce an original instrument, or any part of it, or any pictures made by it, at the time they speak of. Exhibit O, itself, was made by the defendant and a witness Parsons, to be used in this case. Page 105, cross-ints. 10, 11, 12 and 13.

THAYER'S APPARATUS. EXHIBIT 14.

Charles Thayer, on pages 125 to 129, testifies to the methods which he practised, as early as 1848, for taking several pictures on a plate. He does not say himself, and nobody says for him, that these methods involve Southworth's inventions. The instrument he used is not in existence; to use his own expression, it has "passed away." His description is not very clear, but enough appears to show that his method was very different from Southworth's.

Both methods required the camera to be turned on to its side, to be used in an abnormal position. They were therefore obviously only temporary expedients to meet exceptional cases. One method at least required the plate, after taking two pictures, to be carried to the dark room and changed in the plate-holder, while one of the especial merits of Southworth's invention is, that it enables the pictures to be taken in rapid succession. It is pretty clear that he did not take his pictures in axis of the lens, for though he says he used a diaphragm, with an opening in the centre of it, yet he says he placed the plate-holder in the box so that the farther end of the plate, by drawing the slide, would only *expose a certain part of the size of the opening*. If he only exposed the plate, by drawing the slide part way to uncover a part of the central aperture, it is pretty clear that that part must have been at one side of the axis of the lens.

The second method to which he gave the preference certainly produced the picture at one side of the axis of the lens, for the hole in the diaphragm, before which he says the picture came, was in the *lower right-hand corner* in taking the first two pictures on a plate, and at the *upper right-hand corner, in* taking the remaining two. What this witness did was not only in 1848, after Southworth had reduced his invention to practice, but it did not embody Southworth's invention.

Parsons' Apparatus.

Seth E. Parsons is called to describe an instrument made by him for one of the successors of Meade Brothers in 1851, by altering an old instrument. He cannot produce the instrument or any pictures taken by it, but in his description of it on pages 76 and 77, int. 12, and on pages 81 and 82, ints. 22 to 26, he admits that in his apparatus the exposed portion of the plate was not directly opposite the axis of the lens. He also states the important fact that it was customary to turn the instrument on to its side to use it. It was evidently a mere makeshift to serve a temporary purpose, or try an experiment.

He cannot produce the box or any pictures made by it, and he does not even attempt to produce a duplicate of the box.

COBDEN'S APPARATUS. EXHIBIT N.

Arthur Cobden is called to testify to the use of an instrument in England in 1848–49, which he describes by means of exhibit N. Page 90, int. 9. This date does not go back of Southworth's, but if it did there is no evidence that the instrument was patented as described in a printed publication, and it could not then constitute a defence even, if it embraced the invention. It is unnecessary, therefore, to spend time in considering its construction. The witness does not attempt to say that he brought such an instrument to this country or ever knew of one here. Page 91, int. 11. He does not say even that he came to this country before 1848.

SIEBERT'S APPARATUS. EXHIBIT W.

Frederic Siebert also testifies to the use of an instrument in Prussia, which he produces as Exhibit W, and which he says he brought with him to this country. But as there is no evidence that the instrument was patented or described in a printed publication, its use abroad will not invalidate Southworth's patent, and as he says (page 135, cross-int. 1) that he did not land in this country till the 22d or 23d of December, 1854, its use in this country clearly does not invalidate Southworth's invention; for the latter made his last improvements in the instrument in November, 1854. Page 43, int. 22, and page 51, cross-int. 19.

SCHOONMAKER. EXHIBIT R.

The defendant also produces another instrument, marked Exhibit R, which he says (page 105, cross-ints. 14, 15 and 16) he found in his establishment at Troy, but he does not know when he first saw it, or who made it. He does not pretend that this instrument is older than Southworth's invention, or even older than his patent. But on page 101, ints. 21, 22, 23 and 24, he testifies that he bought out the Meade Brothers, in Albany, in 1850, and that he found among their apparatus an instrument of which Exhibit R is a substantial model, for taking two or more pictures on a plate. He does not say that he ever saw the instrument used by Meade Brothers, or that he ever used it himself, though he does say that

when the call arose for card photographs, he *did not* use that instrument, but adopted another entirely different. Page 102, int. 39. He also says, in answer to interrogatory 39, that shortly after he bought out Meade Brothers, he made several pictures on a plate with an instrument like Exhibit R, but he does not say it was with the instrument found among the apparatus of Meade Brothers.

So too, he says, he had before seen two or more pictures on a plate at their establishment, and that they explained the mode of taking them, but he does not give us the explanation, or say the pictures were taken with that instrument, and he admits (page 106, cross-ints. 18 and 19) that he cannot produce any apparatus actually used by himself, or others, before 1855, for taking two or more pictures on a plate, or any pictures so taken. It is important to notice that the witness (Parsons) was well acquainted with Meade Brothers, yet he knew nothing of Exhibit R.

Balch's Apparatus. Exhibit 12.

H. A. Balch testifies (pages 136, 137), that in 1849 or 1850, he made in Joliet, Ill., an instrument represented by a diagram, Exhibit 12. He gives an obscure description of it, and says he used it about two and a half years, and made probably fifty pictures. No expert has endeavored to make the explanation intelligible, or show how the instrument resembled Southworth's. It is evident that it was operated very differently from Southworth's, that no other was ever made like it, and its abandonment shows that it was worthless. It had no provisions for taking pictures side by side, and even if it had been more valuable than it appears to have been, it could be regarded only as a partial solution of a problem which Southworth solved completely and practically.

Hester's Apparatus. Exhibit 13.

The same observation, are applicable to the instrument testified to by Alexander Hester (page 138), and represented by a model, Exhibit 13. He says he used the instrument at Galena, Ill., in 1850; made, *perhaps*, a hundred impressions with it, and left it behind him when he removed from Galena in 1854. He intimates that the instrument may have been burned. We submit that an instrument which was not worth moving,

which was never duplicated, and which was left to its fate after being used occasionally for two or three years to the extent of taking a hundred pictures as the witness thinks, has not had such a history or existence as should invalidate a patent.

Dewey's Apparatus. Exhibit Y.

R. H. Dewey (pages 116 to 118) testifies to using a camera which he altered in 1852, so as to take several pictures on a plate. He produces the instrument, marked Exhibit Y, in an imperfect state. Page 118, cross-ints. 10, 11. He only speaks of making one picture with it himself; but he says another person made pictures on it, but when or how many, he does not say. There is no evidence of a use which could be regarded as anything more than a trial; a trial which might have proved, and undoubtedly did prove, that the instrument was practically worthless. The witness does not say that the instrument was used with practical success, and his failure to say that may be taken as conclusive that he did not. Indeed, his description of the mode of using the instrument is enough to show that even if he had preceded Southworth, he did not successfully reduce the invention to practice. The instrument required an orifice to be cut through the bottom of the camera, through which the plate-holder and plate could pass into a chamber constructed in the camera stand. The plate-holder was provided with a diaphragm, which had orifices through which the plate was exposed. How the plate was protected from the light through these orifices when the pictures were not being taken, he does not explain; and he does not produce this part of the instrument. And it is clear from his answer to cross-int. 12, page 118, that he could not take pictures side by side on a plate without removing the plate and refocusing the instrument. It is clear that the instrument differed widely from Southworth's. The witness says his instrument was the same in principle as Southworth's; but even if it were so, he does not show that the instrument was so constructed as to render the principle practically valuable. He does not show that he had successfully embodied the principle in an instrument so as to reduce it to practice.

McKown's Apparatus. Exhibit 1.

George McKown testified to an exhibit marked No. 1, which he says is substantially like an instrument he bought of Mayson Shaw, in Philadelphia, in 1852. Page 119. He says he used the instrument in Philadelphia, and in Ulster county, N. Y., in October, that year. He can't tell what has become of the box. Some pictures are produced which are said to have been made in Kingston, N. Y., by another man with a like instrument, in 1853.

The instrument differs in construction from Southworth's, and is not shown to have had any practical value. No witness testifies to its substantial likeness to Southworth's, and the date is not fixed upon any satisfactory data. And though if the instrument was made and used at the time the witness states, there were others who know it, yet none of them are produced to corroborate his statement.

Pine's Apparatus. Exhibit M.

George W. Pine testifies to the invention and use by himself, in 1852, of an instrument which he describes in answer to the 8th interrogatory. Page 84. According to his description, the plate-holder had all the movements of Southworth's, and the pictures were taken in the axis of the lens. But the instrument had no provision for holding the plate-holder in the necessary position for taking the pictures on the lower end of the plate. A cleat, I, is said to gauge the perpendicular movements of the plate-holder; but it is evident that the holder rests on this cleat only when the upper pictures are taken, and that it has no support when raised to bring the lower part of the plate into the field of the lens, and must have been held there by the operator while the picture was being taken. In the patent, it is stated that the use of a support for the plate-holder in all its positions is absolutely essential, as the attempt to hold the instrument by hand would shake the camera, or move it from its normal position whilst the picture is being taken. Page 60. Southworth provides for this difficulty by a guide-piece, L, which supports the plate-holder when it is raised to its highest position.

But whether the original instrument was defective or perfect in this particular, we submit that the evidence of its having been made before

Southworth made his final improvement, is wholly insufficient to invalidate a patent.

Pine is the only witness who testifies to the instrument, and he is an interested witness, for he has been sued as an infringer. Page 88, cross-int. 12. The original instrument is not produced, and the exhibit was made for the purposes of the suit from memory alone. The witness declares that he thought of getting a patent upon it, but decided not to, thinking it would not pay for the expense. Cross-ints. 10 and 11. Obviously he did not attach much importance to it. He has not seen it since 1856 or 1857. He says (cross-int. 7) that while he had the instrument in his possession, he explained it and the manner of using it to other photographers, but not one of them is called to support this statement. He says he left the instrument in a photographic car in Cambridge, N. Y. This car he sold to other parties, but those parties are not called to prove that such an instrument was there. Page 86, int. 13.

He considers the instrument described by him to be the same in principle as Southworth's, and he also considers an instrument described by the witness, Parson, in which the picture was not taken in the axis of the lens, but at one side, to be also the same in principle. If he considers this difference to be unessential, how easily his recollection might fail him on that point, after so many years.

He says he fixes the date from a journal or diary which he kept, and which was at his home when he was testifying; but he does not produce that journal or even state what it contains; and when asked why he did not produce it, he replies that he has not deemed it necessary because he could fix the time from other reasons stated. Page 89, cross-int. 19. But the only other thing by which he fixes the date is his recollection that he travelled in Georgia the same year. Cross-int. 16. And from his answer to cross-int. 19, it is not unfair to conclude that what he fixed by that journal is the date of that journey, and not the making of the instrument. If he had a memorandum of the making of the instrument he would be likely to say so, and not rest upon his recollection of its being made in the same year with a given journey.

The burden of proof is upon the defendant to establish the fact that this man did in 1852 what he says he did; and where it would be so easy to corroborate the testimony of the witness if his statements are

true, by a memorandum, or by other witnesses, the party upon whom the burdens of proof rests ought to produce such corroborating evidence, or be held subject to the presumption that the witnesses and the memoran dum referred to would not, if produced, support those statements.

The history of patent litigation is crowded with illustrations of the unreliability of the memory as to the times when alleged inventions have been made. And in this case we are compelled to rely upon the recollection of a witness, not only for the date, but for the alleged invention itself, and that witness an interested one.

Becker's Apparatus. Exhibits W and X.

Two exhibits are produced by Alexander Beckers, marked respectively "W" and "X."

The former is obviously a very different instrument from Southworth's, as the plate is revolved around a centre to bring the different parts to the focus of the lens. The pictures must necessarily be taken on radial lines and not lie side by side, as by Southworth's method. The instrument is not shown to have any practical value, and the witness does not attempt to show that it is substantially like Southworth's. The original instrument is not produced, and there is no evidence that more than one was ever made, or that that one was ever used. It is said to have been made in 1852. But no reference is made to any circumstances by which the date can be fixed. Pages 113, 114 and 116.

Exhibit X, produced by the same witness, is said to have been made by the witness in 1853, and it is admitted on the record to be substantially like the patented instrument. Pages 114, 115.

The witness states that he made pictures with it, which he sold to the public, and that he knows that other parties made pictures with similar instruments. But as he does not state when they did this, or with whose instruments, and as Southworth states (page 44, int. 29) that he had his instruments made and put on sale immediately after the grant of his patent, it may well be that this use by others was with Southworth's own instruments. There is no evidence that the witness made more than one instrument. No other witness is called to testify to a knowledge of this instrument, not even his partner at the time, Victor Piard. Others must have seen it during the five years he says he used it at

264 and 411 Broadway. Page 114, int. 11. Would not his partner and other witnesses have been called to confirm his statement about the date of so important an exhibit as this, if their recollections were the same? Where it was so easy to bring confirming evidence, the neglect to do so may justly raise a doubt about the accuracy of the single witness who is produced.

The witness admits that he arrives at the date from the circumstance that he made the instrument as soon after moving into his new place at 264 Broadway, as he could, after getting the place in order; and as he has ascertained from a receipt for rent, that he moved in on the first of May, 1853, and he knows he got his place in order in about three months, he is confident that he made the instrument in 1853. But how easy for him to be mistaken as to the length of time that elapsed after he got his place in order? How likely it is, from the neglect to call other witnesses, that he may be mistaken as to the use of the instrument at that place? It appears, also (page 124, int. 11), that within four years, he moved again to 411 Broadway. How easily he might be mistaken as to which moving it was after which he made the instrument! In his answer to the fifteenth cross-interrogatory (page 115), he says he has a distinct recollection of making the instrument, but the *dates are obtained* from the receipt and the circumstances of his moving. Just before, he had said that he was not positive as to the month when he made it, and his manner of answering the fifteenth question shows that he had not a clear recollection of the date, and had reached a conclusion by associating the making of the instrument with the moving. But what reliable association could there be between the moving and the making of an instrument some months afterwards (as he says), especially when there was another moving?

The plaintiff comes before the Court with a patent for an invention, the history of which is given by the inventor and several corroborating witnesses, showing that it was in a practical working shape in 1847, but that a final improvement was made in 1854. Will the Court fix the date of the invention at the time of the last improvement, and then, after the lapse of fifteen years, overthrow the patent upon the statement of a single uncorroborated witness, who fixes a date when he made an instrument by associating the making with one of two similar events having no natural connection with it? The witness certainly gives no

reason for connecting the making of the instrument with the first moving rather than the second, and there is certainly nothing in the nature of the case for doing so.

Claudit's Apparatus. Exhibits 15, 16.

The defendant introduces a printed description (Exhibit 15) of an instrument by the above party, for taking stereoscopic pictures, and an instrument (Exhibit 16), said to be made in accordance with the description. Haines, pages 129, 130, ints. 1 to 7.

The witness does not say that Southworth's invention is substantially described in the article produced. He only says that the instrument made, as he says, after the description, *can* be used to take two pictures on the same plate, by moving half the plate across the axis of the lens. But on cross-examination (page 133, int. 6), he admits that the instrument was not designed by the invention to take more than one picture on a plate. If it was not designed to do what Southworth's invention was, and was not described as so designated, it cannot defeat Southworth's patent, even if it might in some way be used to take the pictures on a plate. Obviously, Southworth's was not described in a printed publication.

Clark's Apparatus. Exhibits 17, 18.

Another printed publication is referred to as containing a description of Southworth's invention, and an instrument is referred to as being made in accordance with the description. Exhibit 18. But though the witness (Haines) is examined to prove that the instrument is made according to the description, he fails to say, the only thing important to be said, that the printed description contains a description of Southworth's invention.

More than this, neither of these articles were published before the true date, as we claim, of Southworth's invention in the spring of 1847.

Sherman & Smith
B. R. Curtis

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UNITED STATES OF AMERICA.

Circuit Court of the United States.

DISTRICT OF MASSACHUSETTS. MAY TERM, 1865.

IN EQUITY.

OPINION IN THE CASE

OF

SIMON WING

VS.

CHARLES F. RICHARDSON.

BOSTON:
PRINTED BY ALFRED MUDGE & SON, 24 SCHOOL STREET.
1865.

of law, and, when regularly issued, and in the usual form, they are, if introduced in the case, *prima facie* evidence that the person named as such was the original and first inventor of what he has described therein as his improvement. Such presumption, however, in the absence of the application for the patent, extends back only to the date of the letters patent, and in no case does it extend farther back than to the time of the filing of the original application. Whenever a party desires to show that his invention was made prior to the date of his application for the patent, he must prove the fact by other sufficient evidence, because no such presumption arises from the letters patent or the application or both combined. Specification of the re-issued letters patent describe the invention as certain improvements in taking photographic impressions as therein described. Separate plates, as the inventor represents, had previously been used for each impression and consequently where several impressions were to be taken as in multiplying copies it became necessary that the plate should at each impression be removed and replaced by another. Effect of those changes was to cause delay and inconvenience. Object of this invention is to remedy that difficulty, and it consists, as the patentee states, in bringing successively different portions of the same plate or several small plates in one plate-holder into the field of the lens of the camera. Practical operation of the machine is that it brings different portions of the same plate or several smaller plates secured in one plate-holder into the axis of the focus of the lens, so that several impressions may be made on the same plate with equal correctness. Claim of the re-issued patent is the "bringing the different portions of a single plate, or several smaller plates, successively into the field of the lens of the camera" substantially in the manner and for the purpose set forth in the specification. Patentee states that in carrying out his invention he makes use, as the preferred method, of a peculiarly arranged frame, in which the plate-holder is permitted to slide, but in which its position is so definitely indicated that the operator can quickly and accurately adjust the plate or plates to effect the described result. Decided preference is given to that arrangement, but the patentee states that his improvement may be embodied by causing the lens of the camera to be made adjustable in different positions with respect to the plate, so that different portions of the plate, although it remains stationary, may be successively brought

into the field of the lens. One of the experts describes the invention embodied in the patent as a mechanism so organized that a lens may be properly focussed with regard to different plates, or, different parts of the same plate, without removing the plate from the mechanism until as many impressions are made as may be desired, and it is not perceived that the description is too broad if the definition be limited to the particular means set forth in the specification. Doubt cannot be entertained that the invention is one of merit, and it is equally clear that the patentee, whether the original and first inventor or not, was the actual inventor of his improvement, and that, in making it, he borrowed nothing from any of the devices set up in the defence. Nothing of that kind is pretended, but it is insisted that the evidence shows as matter of fact that an apparatus substantially the same had been constructed and reduced to practice by one or more persons at a prior date, so that the patentee is not the original and first inventor of his alleged improvement. Patentee gave the directions for making his first model, or machine, in August, 1846, and it was made and sent to him at Boston in November following. Design of the camera then constructed was that it should slide in the frame so as to make successive pictures in the axis of the focus of the lens, but a frame was never actually adapted to that machine. Statement of the patentee is explicit that it was designed to operate in either of the modes pointed out in the specification of the reissued patent, but the frame was never made, and consequently was never so used. He also states that he constructed another machine for the same purpose, in the year following, which was used in taking pictures for seven or eight years. Principle was the same, but instead of moving the frame, the apparatus was so constructed that it moved the lens over the plate, being, in fact, the same arrangement suggested in the patent on which the suit was founded. The reasons given by the patentee, why he reduced the second form of his invention to practice, before he adapted a frame to the first machine, was that the first would be expensive, and that the second required fewer changes in the old apparatus, and could be perfected and put in operation at much less expense, as he could use his old camera and old frame. Belief of the witness is that he completed that machine in 1847, but he states positively that he used it early in the spring of 1848, and that it was a com-

pleted machine. His recollection is distinct that he completed it here, in this city, before he went to California, and that he commenced preparations to go there in the winter of that year.

Suffice it to say, without reproducing more of the testimony, that the invention held by the complainant is shown not only to have been made as early as the latter part of 1847, or the first part of the year 1848, but that the same was reduced to practice, as an operative machine. Respondent does not controvert the position that the patent, if it be valid, covers the two methods described in the specification. Both undoubtedly were invented by the patentee, and they are clearly embraced in his claim. Such are the views of the experts, and such is the legal construction of the patent.

2. Infringement is clearly proved, and the allegation in that behalf is scarcely denied. Regarding the evidence as plenary upon that point, it does not seem to be necessary to say more upon the subject.

3. Re-issued patent in this case is for the same invention as that described in the original patent, and therefore is not affected by the cases cited in that behalf by the respondent.

4. Abandonment is not proved. On the contrary, the reasons assigned for the delay which ensued before the application for the patent was presented are satisfactory, and they show that there is no unexplained want of diligence in perfecting the invention.

5. Patent of the complainant is not for a principle or result, but for the means described for accomplishing the result, and consequently is valid notwithstanding that objection.

6. Evidence offered by respondent to show that others had made similar machines prior to the date of the invention in question is not satisfactory. Recollections of Marcus A. Root, after the lapse of sixteen years, are quite too indistinct and uncertain to set up a lost machine to defeat a valuable improvement and deprive a meritorious inventor of the fruits of his toil and labor. Care should be observed in investigations of this nature to guard the public against a growing propensity on the part of patentees to expand their patents beyond what they ever invented, and at the same time to protect them against the equally unjust claims of pretentious persons who always stand ready to prove that they are the real inventors of what has been patented to another. Neither have any merit, and both should be discouraged.

Dates stagger a good memory, even when the inquiry has respect to recent events; but, after the lapse of sixteen years, under the circumstances of this case, I do not think it safe to rely upon the unsupported statements of this witness. They are too uncertain, inconsistent, and contradictory. Statements of Philip Haas are no better, but in fact are less reliable. He contradicts himself, is contradicted by the circumstances, and by the testimony of the other witnesses in the case. Attempt is made to support his statements by the testimony of Enos B. Foster, but it can hardly be said to have that effect. When he went into the employment of the other witness he was but fifteen years of age, and they both admit that the alleged machine is lost. They do not attempt to testify to but one picture now in existence taken with that machine. Their statement is that it was lost in 1850, and they afford no reason to infer that any of its parts are in existence. Theory is that it was made by one Saxton, in 1840, under the directions of Philip Haas, and that it was stolen from the owner's place of business. But the proofs show that he never made another, and ever after used a machine constructed according to the old method. He gave a second deposition, and in that he states that he was mistaken, that it could not have been made as early as 1840, but thinks it was four years later. Complainant called a witness who worked for Philip Haas the latter part of 1846 and for the most part of 1847, and he states that he never saw any such machine in his shop, although he was an assistant operator and had the fullest opportunity to see all the models or machines in the apartments. He had for eleven months, as he states, the general charge of all apparatus and material, and everything that pertained to the business of his employer, and it is sufficient to say that his statements are utterly inconsistent with the testimony of the principal witnesses for the respondent. In view of the whole evidence I am of opinion that the respondent has not proved that the patentee in this case was not the original and first inventor of the improvement described in his re-issued letters patent. Having come to this conclusion upon the evidence, I do not find it necessary to determine the other questions of law discussed at the bar. Decree for an account and injunction. Cause referred to a Master to ascertain the amount of the damages.

SUPREME COURT OF THE UNITED STATES.

DECEMBER TERM, 1869. No. 259.

SIMON WING, Appellant,

vs.

CHRISTOPHER C. SCHOONMAKER.

Appeal from the Circuit Court of the United States for the Northern District of New York.

BRIEF AND POINTS FOR APPELLEE

HENRY BALDWIN, JR.,
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PHILADELPHIA:
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1870.

Supreme Court of the United States,

DECEMBER TERM, 1869. No. 259.

SIMON WING, Appellant,

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Appeal from the Circuit Court of the United States, for the Northern District of New York.

BRIEF AND POINTS FOR APPELLEE.

The Case.

Appellant as assignee of Albert S. Southworth, filed his bill against this appellee for an alleged infringement of Letters-patent of the United States granted to said Southworth, April 10, 1855, and reissued September 25, 1860, for a "new and useful Plate Holder for Cameras." The allegation in the bill is that the defendant (appellee), "without the consent or license "of your orator (appellant), and in violation of his rights, and in "infringement of said reissued Letters-patent, did, after the date "thereof and previous to the 7th day of August, 1865, and in "the city of Troy aforesaid, unlawfully and wrongfully make, "sell, and use, cameras embracing in their construction and mode "of operation, the said improvement, the exclusive right to "which in said city of Troy was then vested in your orator

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"(appellant), by the reissued Letters-patent above mentioned, "and said assignments thereof." (Record p. 2, fol. 4).

The answer denies *inter alia* that said Southworth invented any improvement in photographic cameras; denies "that he "(appellee) is now or has been making and using cameras em- "bodying substantially in their construction and mode of opera- "tion the same improvement or invention as that described or "claimed in said reissued Letters-patent," and "denies any and "all infringement and violation, and all intention to infringe "any of said patent rights, stated and charged in said bill of "complaint, or any right or privilege belonging to said com- "plainant."

The answer alleges *inter alia* that the reissued Letters-patent are not for the same invention as the original Letters-patent, and that by reason thereof the said reissued Letters-patent are null and void.

That the claim of said reissued Letters-patent is not such an one as the patentee is legally entitled to, and that by reason thereof said Letters-patent so reissued are void.

That the said reissued Letters-patent cover inventions and things not made by said Southworth, but known and used before the said supposed invention of said Southworth.

That what is patented by said reissued patent was well known and in public and successful use long prior to the said supposed invention of said Southworth by numerous persons and at various places specified and designated, and

That it was described in certain public works, which are duly particularized.

After a hearing upon the issues thus made, and upon the evidence presented in the record, Mr. Justice Nelson dismissed the bill for reasons stated in his opinion, which will be found reported in 3 Fisher's Patent Cases 607, as follows:

"The bill is filed in this case, founded on a patent to A. S.

"Southworth, April 10, 1855, for a new and useful plate-holder "for cameras, and reissued September 25, 1860.

"The claim in the reissued patent is, 'bringing the different "portions of a single plate or several plates, successively into "the field of the lens of the camera, substantially in the manner "and for the purpose specified.'

"The patentee states in his specification, that it had been "customary to use a separate plate for each impression, the "plate being removed from the camera and replaced by another, "when several impressions of the same object were to be taken, "as in multiplying copies. This caused delay and trouble, to "obviate which was the object of this invention, and which con-"sisted in bringing, successively, different portions of the same "plate or several smaller plates, secured by one plate-holder, "into the field of the lens of the camera; and in carrying out "the invention, the patentee has made use of a peculiarly "arranged frame, in which the plate-holder is permitted to "slide, and in which the position of the plate-holder is definitely "indicated to the operator, &c.

"The only real question in the case is, whether or not the "patentee was the first and original inventor of the above im-"provement. The burden of the proofs, both on the part of the "complainant and defendant, bears upon this point.

"It is insisted on the part of the complainant, that the im-"provement was conceived and put into practical use as early "as 1846, and, if not, as early as the winter of 1847–8. The "patent was not issued till 1855. I have looked, with some "care, into the proofs, which are quite voluminous, and am "satisfied this position is not sustained.

"On the contrary, the better opinion is, the improvement "was not perfected by the patentee till the year 1854. He "went, according to his own account, to California, in the win-"ter of 1848–9, and remained there two years; and on his re-"turn he took up the subject of the stereoscope, and was en-

" gaged in considering new plans and new ideas on this subject, " and taking out patents thereon, until he was taken sick and " shut up in his room, when he applied himself to finish the " idea of taking pictures rapidly in centre of the lens, by adapt- " ing the movement in a frame which would fit any ordinary " camera. Again, he says on his cross-examination, that was " three years after his return from California that he was sick, " and which was in November, in the Fall of 1854. He says, " also, on his examination-in-chief, that he had not perfected " the mechanical parts of his machine, so as to carry out his " idea readily, when the California excitement led him to go " there.

" He further says, that the instrument made by Coburn in " the Fall of 1846 was abandoned, and that he then contempla- " ted a different improvement. This was by moving the lens " over the plate. This idea was not in the first patent at all, " and is only alluded to in the reissue. Now the proofs are full, " that this idea of making the same impression on different " parts of the same plate, by the use of a sliding plate-holder, " existed and was carried into practical operation by working " machines as early as 1847–8, and was in use by several prac- " tical photographers some seven or eight years before the date " of the patent of Southworth, and before he had perfected his " machine.

" Entertaining these views, it follows that a decree must be " entered for the defendant."

In deference to this opinion the appellee proposes to treat, chiefly, the point stated by Mr. Justice Nelson; and only to deal with the other issues, made by the answer, very briefly, though without waiving them.

I.

The Date of the Patentee's Invention

The original patent claims a machine, to wit: the plate-holder.

The reissue claims a mode of operation, and a result, unless construed differently from its general terms.

To infringe the original claim, a plate-holder, in combination with the frame in which it moves, constructed and operating in the manner and for the purpose substantially as set forth in the patent, must be employed.

To infringe the reissued claim it is only necessary that, *quocunque modo*, a series of plates or different parts of a single plate be brought successively into the field of the lens of the camera,—*unless* the claim means (by the words "substantially "in the manner and for the purpose specified"), by means of the plate-holder in combination with the frame in which it moves, constructed and operating in the manner and for the purpose substantially as set forth.

As a claim that comprises all means of doing a thing is bad, the presumption is, that the reissue intends to claim the means which it specifies for doing the thing.

A patent cannot be for an effect produced distinct from the process or machinery necessary to produce it, *O'Reilly* v. *Morse, 15 How., 62 (119);* and the first inquiry, therefore, would seem to be what are the means by which Southworth brought his plates or the different parts of his plate successively into the field of the camera. *Corning* v. *Burden, 15 How., 252 (267); Burr* v, *Duryee, 1 Wall., 531 (570); Case* v. *Brown, 2 Wall., 320 (327).*

Exhibit A. Record. p. 55.
No. 12,700.
April 10th, 1855.
Albert S. Southworth,
Plate-holder for Cameras.

Whereas, Albert S. Southworth, &c., has alleged that he has invented a

Exhibit B. Record. p. 57.
Reissue, No. 1,049.
September 25, 1860.
Albert S. Southworth,
Plate-holders for Cameras.

Whereas, Albert S. Southworth &c. has alleged that he has invented a new

new and useful plate-holder for cameras * * * * has made oath that he does verily believe that he is the original and first inventor or discoverer of the said plate-holder.

These are, therefore, to grant, &c., * * * the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said plate-holder, a description whereof is given in the words of the said Southworth, in the schedule hereunto annexed, and is made part of these presents.

The Schedule referred to in these Letters-patent, and making part of the same.

Be it known that I, A S. Southworth, &c., have invented a new and useful plate-holder for cameras for taking photographic impressions.

Fig. 1 is a front view.

Fig. 2 is a rear view.

Fig. 3 a similar view, the cover being dropped into a horizontal position.

Fig. 4, a vertical section through the centre.

Fig. 5 an end view.

Fig. 6 details which will be referred to hereafter.

Fig. 7 the slider.

In taking daguerreotypes of small size for lockets, it often occurs that the first picture taken is not properly timed, or exposed to the light, and a second or third is required to be taken before a perfect picture is obtained. Each picture thus taken requires a freshly prepared plate, which causes a considerable consumption of time.

The object of my invention is to

and useful plate-holder for cameras, &c., * * * has made oath that he does verily believe that he is the original and first inventor or discoverer of the said plate-holder.

These are, therefore, to grant, &c., * * * the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said plate-holder, a description whereof is given in the words of the said Albert S. Southworth, in the schedule hereunto annexed, and is made part of these presents.

The Schedule referred to in these Letters-patent, and making part of the same.

Be it known that I, Albert S. Southworth, &c., have invented certain improvements in taking photographic impressions.

Fig. 1 is a front view of the apparatus which I employ in carrying out my invention.

Fig. 2 is a rear view.

Fig. 3 is a similar view, the cover being dropped into a horizontal position.

Fig. 4 a vertical section through the centre.

Fig. 5 an end view.

Fig. 6 details which will be referred to hereafter.

Fig. 7 the slider.

In taking daguerreotypes, photographs, &c., it has been customary to use a separate plate for each impression, the plate being removed from the camera, and replaced by another, when several impressions of the same object were to be taken, as in multiplying copies, or for the purpose of selecting "the best timed" pictures.

This caused considerable delay and

bring in a rapid succession different parts of the same plate, or different parts of whatsoever material prepared for photographic purposes, into the centre of the field of the lens, for the purpose of either timing them differently, that the most perfect may be selected, or of taking different views of the same object with the least delay possible, or of taking stereoscopic pictures upon the same or different plates with one camera.

My invention consists in a peculiarly arranged frame in which the plate holder is permitted to slide, by which means I am enabled to take four daguerreotypes upon one plate and at one sitting, different portions of the plate being brought successively opposite an opening in the frame, the opening remaining stationary in the axis of the camera, while the plate-holder and plate are moved.

The frame which guides the motion of the plate holder is constructed as follows:

A is the front plate.

B. Zinc plate immediately in rear of A.

C. Hole in the centre of plate B.

D. Zinc slider, closing hole C in B in the customary manner.

E. Strips around the borders of frame A, B.

F. Rear plate hinged to one of the strips E at b.

Between this rear plate (F) and the zinc plate B and within the space enclosed by the strips E, slides the plate holder which is constructed as follows:

G is the frame of the plate holder, into the rectangular opening of which is inserted the daguerreotype plate.

trouble, to obviate which is the object of my present invention, which consists in bringing successively different portions of the same plate, or several smaller plates, secured in one plate-holder into the field of the lens of the camera.

In carrying out my invention, I have made use of a peculiarly arranged frame, in which the plate-holder is permitted to slide, and in which the position of the plate-holder is definitely indicated to the operator, so that he can quickly and accurately adjust the plate or plates.

The accompanying drawings and description so explaining the same that others skilled in the art may understand and use my invention.

The frame which guides the motion of the plate holder is constructed as follows:

A is the front plate.

B. Zinc plate immediately in rear of A.

C. Hole in the centre of plate B.

D Zinc slider, closing hole C in B in the customary manner.

E. Strips around the borders of frame A, B, C, D.

F. Rear plate hinged to one of the straps E at b.

Between this rear plate (F) and the zinc plate B, and within the space enclosed by the strips E, slides the plate holder which is constructed as follows:

G is the frame of the plate holder, into the rectangular opening of which is inserted the daguerreotype plate.

H. The back plate, rests against the daguerreotype plate and holds it in place.

The plate holder thus constructed is allowed to take four different positions within its carrying frame, so as to bring the four different portions 1, 2, 3 and 4, fig. 2, of the plate, successively opposite to the opening C.

It is guided in its motions in the following manner:

I is a block attached to the back plate of the plate holder, which projects through a rectangular opening K in the hinged plate F. The block I is moved in succession into the four corners of the opening K, by which means the four different portions of the daguerreotype plate are brought opposite to the opening C. The motions of the block I are regulated by the guide L, hinged to the plate F at d.

When this block is in the position seen in Fig. 2, the block I rests upon its top edge, and one corner of the daguerreotype plate (3) is opposite to the hole C. When the block I is slidden to the opposite corner of the opening K, still resting upon the piece L, another portion (4) of the daguerreotype plate is brought opposite the opening C. The guide piece L is then thrown back as seen in Fig. 4, and the block I is allowed to drop into the right hand lower corner of the opening K, the block I as it descends, being guided by the edge a, and the portion (1) of the daguerreotype plate is brought opposite the opening C.

By another movement the block I is thrown into the left hand corner of the opening K, the block I sliding in the channel c, when the portion

H. The back plate, rests against the daguerreotype plate and holds it in place.

The plate holder thus constructed is allowed to take four different positions within its carrying frame, so as to bring the four different portions 1, 2, 3 and 4, fig. 2, of the plate successively opposite the opening C.

It is guided in its motions in the following manner:

I is a block attached to the back plate of the plate holder which projects through K, a rectangular opening in the hinged plate F. The block I is moved in succession into the four corners of the opening K, by which means the four different portions of the daguerreotype plate are brought opposite to the opening C. The motions of the block I are regulated by the guide L hinged to the plate F at d.

When this block is in the position seen in Fig. 2, the block I rests upon its top edge, and one corner of the daguerreotype plate (3) is opposite to the hole C. When the block I is slidden to the opposite corner of the opening K, still resting upon the piece L, another portion (4) of the daguerreotype plate is brought opposite the opening C. The guide piece L is then thrown back as seen in Fig. 4, and the block I is allowed to drop into the right hand lower corner of the opening K, the block I as it descends being guided by the edge a, and the portion (1) of the daguerreotype plate is brought opposite the opening C.

By another movement the block I is thrown into the left hand corner of the opening K, the block I sliding in the channel c, when the portion (2) of

(2) of the daguerreotype plate is exposed to the opening C.

I am thus enabled to take four impressions upon different portions of the same plate.

There may be miniatures of the same person taken as before stated, for the purpose of selecting the best for a locket; or they may be different views of the same face taken upon the same plate for the purpose of preserving them together; or they may be daguerreotypes of different persons, as different members of a family; or lastly, stereoscopic pictures may be thus taken with a suitably arranged camera.

It is evident that as the frame A B remains stationary, the opening C, when once placed in the axis of the camera will not change; and the successive pictures will all be taken with equal correctness, and the changes are so quickly made that the aperture of the camera need not be covered from first to last unless different positions or different objects are taken.

The guide piece L, or some equivalent thereof, is absolutely essential, as the attempt to hold the block I by hand would shake the camera, or move it from its normal position whilst the picture was being taken.

Heretofore I have spoken of the above contrivance as calculated to take four pictures upon the same plate. It is evident, however, that it may be so arranged as to take any desired number, as six or eight, for example,

the daguerreotype plate is exposed to the opening C.

I am thus enabled to take four impressions upon different portions of the same plate.

There may be miniatures of the same person taken as before stated, for the purpose of selecting the best for a locket;

or

they may be different views of the same face taken upon the same plate for the purpose of preserving them together;

or

they may be daguerreotypes of different persons, as different members of a family;

or lastly,

stereoscopic pictures may be thus taken with a suitably arranged camera.

It is evident that as the frame A B remains stationary, the opening C, when once placed in the axis of the camera will not change, and the successive pictures will all be taken with equal correctness, and the changes are so quickly made that the aperture of the camera need not be covered from first to last unless different positions or different objects are taken.

The guide piece L, or some equivalent thereof, is absolutely essential, as the attempt to hold the block I by hand would shake the camera, or move it from its normal position whilst the picture was being taken.

Heretofore, I have spoken of the above contrivance as calculated to take four pictures upon the same plate. It is evident, however, that it may be so arranged as to take any desired number, as six or eight, for example,

without departing from the principle of my invention.

What I claim as my invention and desire to secure by Letters-patent is, the within described plate holder, in combination with the frame in which it moves, constructed and operating in the manner and for the purpose substantially as herein set forth.

without departing from the principle of my invention. In this case, however, I use suitable grooves, stops, or indices, by which the operator adjusts the positions of the plates substantially on the same principle that he uses the corners of the opening K in the above described apparatus.

It is evident that my improvement may be embodied by causing the lens of the camera to be made adjustable in different positions with respect to the plate, while the plate remains stationary, so that different portions of the plate may be brought into the field of the lens; this I have tried, but do not consider it practically so good a plan as the foregoing, as it necessitates a change of position of the camera itself, or of the object.

What I claim as my invention and desire to secure by Letters-patent is,

Bringing the different portions of a single plate or several smaller plates successively into the field of the lens of the camera, substantially in the manner and for the purpose specified.

The patentee gives an account of his invention and being asked, Record p. 43, fol. 75, Int. 22, "state what reasons you had for not making application for a patent earlier than you did," answers; "I had not perfected the mechanical parts to "my satisfaction so as to carry out my idea readily. The "California excitement came on, and I wanted rest from eight "or nine years constant study and occupation; considered "that a favorable opportunity, and made my arrangements, "and left, partly for the sake of rest. That occupied about two "years, and on my return the first year my health was im- "paired, and I took up the subject of the stereoscope very "soon after; and was engaged in considering new ideas, "new plans, and new inventions relating to the stereoscope

"and other things connected with our business, studying upon "and taking out patents, until I was taken with the varioloid "and shut up in my room, when I applied myself to finish this "idea of taking pictures rapidly in the centre of the lens by "adapting the movement in a frame which would fit any ordi- "nary camera."

Int. 20. Record p. 43. "When did you go to California, "and when did you return?"

A. "I went in the winter of 1848–9. I think at that time "the great California excitement broke out, and was absent "two years, lacking two months."

X. Q. 18. Record p. 51, fol. 89. "You say in your direct "examination you went to California, and that you went in "part to get rest, &c. State what business you were engaged "in, and what your occupation was while in California."

A. "I spent my time there in the open air at what is called "the mines in the vicinity of Mormon Islands, in daily exercise "and labor, digging for gold, and its attendant efforts."

X. Q. 19. "How long was you sick with the varioloid after "your return from California, and when was it?"

A. "I think it was three years after my return, and I was "sick in November, the fall of 1854, shut up in my room for "a little over two weeks; I am not sure as to the time."

All that had been done prior to November, 1854, by the patentee will be found set forth in the depositions of E. N. Coburn, Record p. 28; Josiah J. Hawes, Record p. 30; Nancy N. Hawes, Record p. 36; and the patentee, Record pp. 40, 43, and is fully summed up by Mr. Justice Nelson, towards the close of his opinion in this case.

The utmost that can be said is that, while prior to November, 1854, Mr. Southworth seems to have conceived an idea of a mode of multiplying pictures, and to have commenced an experiment upon the plan of moving the lens over the plate, he never reduced that idea to practice, but abandoned it for seven or eight years, and at the end of this period, from a new

point of departure, developed his subsequent invention, to wit: a plate holder and a frame as described in the patent.

His first idea was never brought to a patentable condition.

Reed *v.* Cutter, 1 Story, 599; Many *v.* Jagger, 1 Blatchf., 383; Foote *v.* Silsby, Id., 464; Parkhurst *v.* Kinsman, Id., 494; Goodyear *v.* Day, 2 Wallace, 299.

It is therefore submitted that the patented invention cannot date back further than the month of November, 1854, and the next question is naturally :

II.

The State of the Art.

Amongst others named in the answer as having had a prior knowledge and use of the thing patented is Alexander Beckers, whose deposition is found on pp. 113–116 ; He proves that in 1852 he made a sliding plate-holder, of which Exhibit W, Schoonmaker, is an exact model, and describes its operation.

He produces also a plate-holder marked Exhibit X, Schoonmaker, which he made in 1853, and used for about five years.

Similar instruments were also used by other photographers, and he describes the manner of their use. Record p. 114, fol. 192, and "the counsel for the plaintiff here admits that the exhibit marked X, Schoonmaker, is the same in principle and operation in producing pictures as the invention described in Southworth's patent, marked Exhibit A and B, Wing, herein."

Samuel J. Thompson, Record p. 70, testifies to having used and seen used by others the sliding plate-holder, in camera boxes at Albany in 1847, and afterwards ; the principle and the mode of operation being the same as those described in the reissued patent in this suit. Record p. 71, Ans. 11. p. 98, fol. 167, Ans. 4, 8.

They "made two pictures without removing the plate-holder from the camera box." Record p. 70, fol. 124, ans. 5. Record p. 72, fol. 129.

Seth E. Parsons, Record p. 75, fol. 132, proves the use of a sliding plate-holder in 1850, and afterwards, by himself and others. P. 78, fol. 137.

George W. Pine, p. 84, Ans. 7, in the year 1852 made four pictures upon one plate by means of a plate-holder which brought different portions of the same plate successively in the field of the lens and axis of the intrument, without removing the plate-holder and plate or either from the camera box. Used it from 1852 to 1856 or 1857, and it was known to various others.

Exhibit M, Schoonmaker, is a model of it.

He explains the loss of the original. Ans. 9, p. 88. Ans. 20, 21, p. 89.

Christopher C. Schoonmaker has been familiar with the principle of making pictures claimed by the Southworth Patent from fifteen to seventeen years past, and also with the operation of such principles. Record pp. 99, 100; Ans. 6.

This witness was examined September 30, 1867, and his answer therefore fixes his knowledge as far back as 1850 to 1852.

Thompson explained to this witness the mode of making pictures by a sliding plate-holder in the winter of 1848–49. Record p. 100, fol. 170, Ans. 9, 14. Record p. 101, Ans. 18, 19.

Produces a model, Exhibit R, Schoonmaker, of a plate-holder and frame purchased by him in 1850, when he brought out the business of Meade Brothers. Record p. 101, fol. 172.

As early as 1847 or 1848 saw pictures, two on a plate, that were made by Meade Brothers, at Albany. Record pp. 101, 102, Ans. 26, 29. Record p. 105, Ans. 2, 9.

In 1849, Letters-patent of the United States were granted to Van Bunschoten and Woodbridge, and Wm. E. Mann, for a Photographic instrument which effected the taking of representations of figures, buildings, scenery, or other objects of any kind, in successive parts. This instrument had a sliding plate-holder and a slide frame, by means of which successive portions of the object were taken upon successive portions of the

plate, substantially in the manner of Southworth's reissued specification. Record pp. 139, 141.

This patent expired in 1863, and fell into the public domain, and with all its capabilities, the instrument described therein became free to be used by any one.

While this patent was in force, no other patent of a later date, claiming or covering this intrument of Van Bunschoten, Woodbridge, and Mann, could be valid.

Upon the expiration of this patent, no part of the instrument described therein or of the mode of operation covered by said patent, could be taken out of the public domain, or appropriated by a subsequent patentee. *Kendall* v. *Winsor, 21 How., 322 (327–8).*

Rodney H. Dewey used a sliding plate-holder, and made duplicate pictures upon the same plate without withdrawing the plate-holder from the camera box, but exposing different portions of the same plate successively in the direct focus of the lens, in 1852. Record pp. 116, 117, Exhibit Y.

Geo. McKown, from 1852 to 1859. Record p. 119.

Jas. B. Sinsabaugh, as early as the Fall of 1846, made two pictures on a plate, Exhibit No. 3: "I took one picture by sliding the plate-holder part way into the box, so as to bring a portion of the plate only before the field of the lens, and then took the second picture by sliding the plate-holder entirely into the box, by which I exposed another portion of the plate before the field of the lens." Record p. 121, Ans. 10.

He continued to make such pictures during a period somewhat less than a year, and sold them. Record p. 121, fol. 203.

In 1848, Lorenzo C. Everett used the device. Record pp. 124, 125.

Charles Thayer used the device in 1848. Record pp. 126, 129.

In 1853 and 1854, the device was described in printed public works. Record p. 29. Exhibit 16, Schoonmaker, is one of the instruments described in the last named publication. Record p. 130, Ans. 6.

In 1854, Frederick Seibert brought with him from Berlin, Prussia, an instrument, Exhibit 10, Schoonmaker, in which he took two pictures upon a plate by sliding the plate-holder. He used it in New York in 1854 and up to the Spring of 1855. He had previously used it as early as 1850 or 1851 in Prussia. Record pp. 134, 135.

H. A. Balch, as early as the winter of 1849–50, at Joliet, Illinois, used an instrument that made more than one picture on a plate with one lens without taking the plate-holder from the camera box. Record p. 136, Ans. 3.

He sold the instrument in 1852, Record p. 137, after having used it about two and a half years. Record p. 137, Ans. 6 and cross-examination.

A. Hessler, at Galena, in the Fall of 1850, used a moving plate-holder for making several pictures on one plate with a single camera, in a mode described fully at pp. 138 and 139 of the record.

The patentee, p. 45, fol. 79 says: Int. 35. "Was there any "mode known previous to your invention, of taking more than "one picture upon a single plate? If so describe it." Ans. "There was method and manipulations, two or three modes "known by myself, and I know that others knew them; I saw their "work on exhibition in Broadway, New York. In 1842 or 1843 "I made four pictures upon a plate by adjusting the image upon "the ground glass so that by swinging the camera a little to "the right and left I could use one quarter of the plate, and "then the next quarter on the same end, and then by carrying "the plate into the dark closet and changing its ends, I could "make two more pictures on the other quarters of the plate in "the same way. I afterwards constructed several slides so by "using two or more together, the slides having portions of them "cut off, with one large slide in front covering the whole, that "by swinging the camera I could make three pictures side by "side, and perpendicular upon the plate at three different "periods of time, without taking the plate-holder from the "camera box. The pictures I saw on exhibition on Broadway,

"New York, were made in the first mentioned way with two "heads at two opposite ends of the plate. The pictures that I "made in 1842 or 1843 is now in my possession, made in the same way." See also Cross Ques. 1, 4, pp. 47, 48.

Charles G. Hill, appellant's witness, says that sliding plate-holders which produced the same effect as that specified in the reissued patent, were used as early as 1854, in Massachusetts and Maine. Record p. 14, 15, Cross Exam. Ans. 8, 9, 16, 17.

III.

Southworth's Idea in 1846, '7.

At this time he contemplated an improvement in camera boxes. The box was to have a movable front, to which the lens was attached. Record, p. 41. Ans. 9.

The plate was to remain stationary. The lens was to be moved. Record, p. 42. Ans. 12, 13.

After making several pictures in this way, he "used the "instrument in its usual form for common work, not using this "particular idea to any great extent, and *considering it and "keeping it a private matter.* The instrument was used with "that front for common purposes for several years." Record, p. 42. Ans. 15. See also p. 40. Ans. 6.

The first camera box projected by Southworth, under the impulse of this idea, was never completed nor used. J. J. Hawes, Record p. 34. Cross Ques. 5, 6. A. S. Southworth, Record, pp. 40, 41. A. 6. *Kendall* v. *Winsor, 21 How., 322 (328-9).*

In 1854 his idea was to make an improved plate holder, with which he could furnish every camera without any change whatever in the camera box. Record, p. 44. Ans. 26, 28. *Curtis on Patents (3 ed) pp. 15–19, §§ 20–24.*

Carhart v Austin. 2 Fisher

IV.

Infringement.

In case this point should be reached, it will be found that the sole proof relating to the appellees' use is contained on p. 12, fol. 22, ans. 14, deposition of Charles G. Hill, witness for the appellant, and in the deposition of the appellee Schoonmaker; Record, p. 104, Ans. 50, 51, and it amounts to this: that the appellee used a camera box having two lenses, and another camera box having four lenses; in each case the plate had a simple movement before the lenses and the multiplication of pictures was produced by the multiplication of lenses, and by this one simple movement repeated. It does not appear that he had a sliding plate holder in the sense of the reissued patent, nor that he had a frame in which the plate holder moved, nor that different portions of the plate were brought successively into the field of the lens by sliding the plate holder in its frame, but rather that the whole use of the defendant consisted in shielding one part of the plate from the action of the light, while subjecting another part to this action in the same manner substantially which Southworth describes as known to him in 1842 and 1843, and which the witnesses on the part of the appellee prove was known and used from 1846 to 1854 by photographers in all parts of the country, and which is described in the patent of Van Bunschoten, Woodbridge and Mann, in 1849. J. B. Sinsabaugh, p. 121, A. 10.

The appellee testifies that he never used a plate-holder made according to the specification of Southworth's Patent; Record, p. 104, A. 51: *Silsby* v. *Foote*, 14 How., 218 (225–6).

It is respectfully submitted

That various modes of repeating the same impression on different parts of the same plate, by sliding the plate-holder, were in common practice and general use as early as 1842, 1843, 1846, 1847, 1848, and thenceforward.

That the invention specified in the patent is therefore a machine.

That in 1849 a patent was granted for a certain instrument of this kind.

That as early as 1852, and continuously thenceforward, sliding plate-holders of various kinds, including the identical device described in the patent, were in general and common public use.

That the invention of the sliding plate-holder was not made by the patentee earlier than November, 1854.

That the patentee did not apply for his patent until April 10, 1855: *Wing* v. *Richardson*, 2 Fisher, 536.

That at this time various devices for the same purpose, including the identical machine described in the patent, had for years been in general public use.

That the appellee has never used the machine described in the patent.

That the mode in which the appellee multiplied his pictures was one of the oldest and best known modes, only practised with an improved camera box: *McCormick* v. *Talcott*, 20 How., 402 (405.)

And that the decision of the court below should be affirmed.

HENRY BALDWIN, Jr.,
Of Counsel.